Yemen Situation Analysis

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Background

Visit methodology, schedule and limitations

USAID/Yemen contacted the MCHIP AOR to invite a team to visit Yemen while procedures for allocating field support funding were underway. Dr. Nahed Matta authorized pre-spending of core funds for a team to travel from 4 to 18 October 2012.

The objectives of the visit can be summarized as follows:

- To conduct in-country needs assessment and gap analysis for the MCH and FP sectors (using document review, meetings, visits to health facilities, etc.)
- To provide recommendations on appropriate areas for interventions and strategic approaches for MCHIP support, taking into consideration work of other partners.

An initial USAID program description for the MCHIP program in Yemen (see annex 2) requested the team to focus on maternal health, newborn health, maternal anemia and family planning. Furthermore, the Program Description specifies that "Support to selected Child Health activities, including immunization, will be based on the need assessment and discussions with MoPHP, the UN and bilateral partners".

The team spent the bulk of the visit within the Sana'a area, except for a one day visit to the neighboring governorate of Sana'a. The visit schedule and list of persons met can be found in annexes 4 and 5.

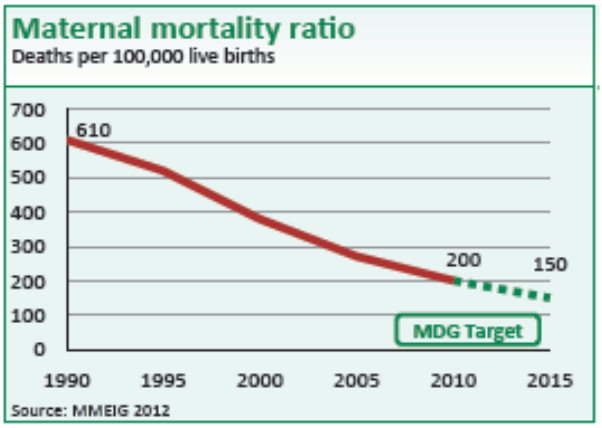
The following report summarizes the findings, impressions and recommendation of the traveling team, based on document review, discussions and site visits.

The limitations in the quality and amount of data available at the central Ministry of Public Health and Population (MOPHP) affected the team's ability to understand the epidemiologic burden of conditions affecting mothers and children as well as to determine with any accuracy the level of coverage of services. The most recent national scale demographic and health survey, PAPFAM, dates back to 2003. Political events in the past 18 months have reportedly negatively affected services, but with the exception of recent nutrition surveys in selected governorates, there is a dearth of population-based or even recent facility-based data. Furthermore, some documents were only available in Arabic, and none of the team members could read this language. A list of documents reviewed is included in annex 1 (forthcoming).

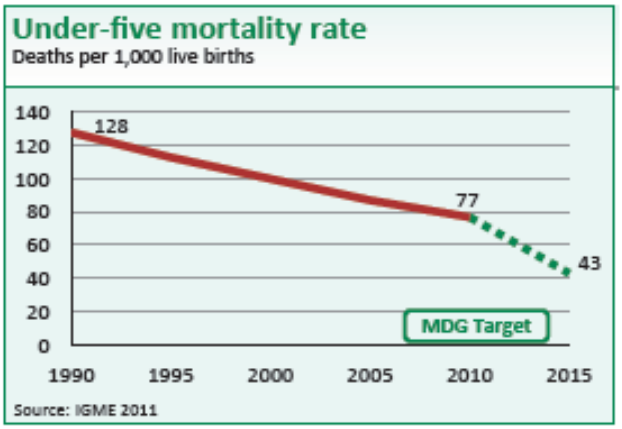
Reportedly, district-level and sometimes governorate-level data can be more reliable. However, because of security concerns, the team was not able to travel as extensively in the country. This is unfortunate as, by all reports, Yemen is a diverse country culturally, geographically and even climatically. Through the valuable assistance of Save the Children colleagues in Yemen, the team traveled to a neighboring governorate, Amran, met with the Director General of the Governorate Health Office, his RH Director, and visited two facilities in the city of Amran. While this visit was extremely helpful, this governorate was perhaps not the best example of what locally available population-based data can be had. On the other hand, the head of the Health Center we visited does collect routine data and was able to share data not just on services covered but also of percentage of expected births and other services based on population data for his district and catchment area.

Basic Facts on MNCH/FP for Yemen *(closest year for which data are available)*

Despite some progress since 1990, Yemen is not on track for meeting Millennium Development Goals 4 and 5 for child and maternal mortality reduction respectively. The total population is estimated at 24,771,809 with 68% scattered among 130,000 rural settlements[1]. There is rapid growth in population with a resulting wide population pyramid and large numbers of children and youth. It is estimated that the population will double in 23 years.



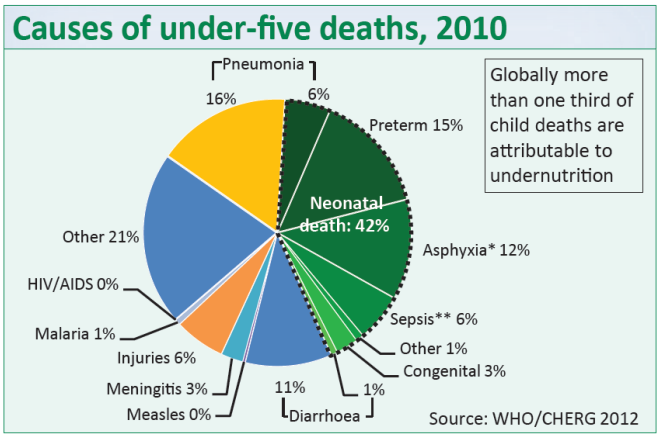
Note: MDG target calculated by Countdown to 2015



	Estimate	Date	Source
Crude Birth rate	38/1000 pop	2007-2011	http://data.worldbank.org/indicator/SP.DYN.CBRT.IN
TFR	5.2	2006	MICS (estimate in CD 2012)
CPR • **Modern method use** • **Unmet need for FP**	28% WRA 19% 23%	2006	MICS
% of women married • **before 15** • **before 18**	 14.1 51.8	2006	MICS
Breastfeeding • **early initiation** • **exclusive <6 mo**	 30% 12%	 2006 2003	 MICS PAPFAM
Maternal mortality ratio **% of maternal deaths in 15-24 age group**	365/100000 33.5	2003	PAPFAM
Attendance at birth • **skilled care** • **institutional**	 36% 24%	2006	MICS
Newborn Mortality rate	43/1000	2010	2012 Countdown

[1] CIA World Factbook for Yemen, accessed online at https://www.cia.gov/library/publications/the-world-factbook/geos/ym.html on 31 Oct 2012

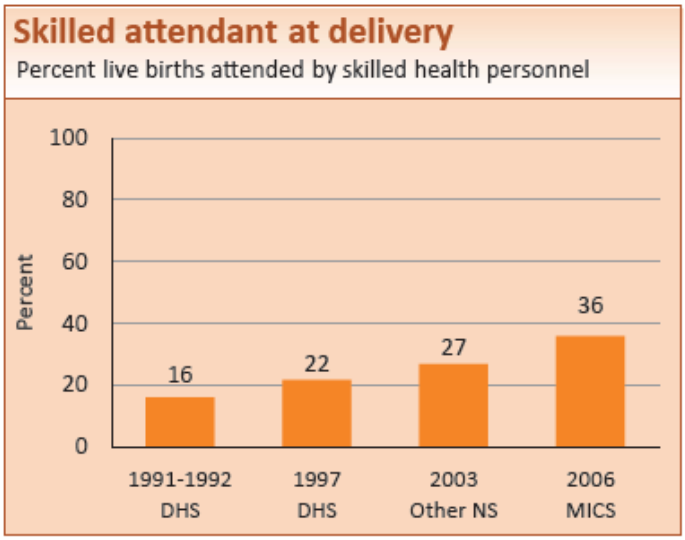
	Estimate	Date	Source
% of low birth weight **% neonatal tetanus protection**	8% 31%	2006	MICS
Under 5 child mortality	77/1000 69/1000 78/1000	2012 2010 2006	2012 IGME 2012 Countdown MICS
Diarrhea treated with ORS	33%	2006	MICS
Suspected pneumonia received antibiotics	49% Urban 34% Rural 38% Overall	2006	MICS
Access to improved water sources	74% Urban 52% Rural 59% Overall	2006	MICS
12-23m fully immunized	18%	2006	MICS



According to the MICS, the under-five mortality rate was 78 per 1,000 live births in 2006, down from 128 per 1,000 live births in 1990. Without dramatic change in overall policy, preventive activity and service delivery strategy, the current 2.5 yearly average rate of reduction in under-five mortality rate is insufficient to reach the 2015 target of 43 per 1,000 live births.[2]

According to the Countdown 2012 Report[3], pneumonia and diarrhea accounted for 16% and 11% respectively of all causes of child mortality in 2010. Unlike Sub-Saharan African countries, malaria and HIV/AIDS do not seem to have major impact on childhood mortality in Yemen.

Figure 1. SBA from Yemen Countdown 2012 profile



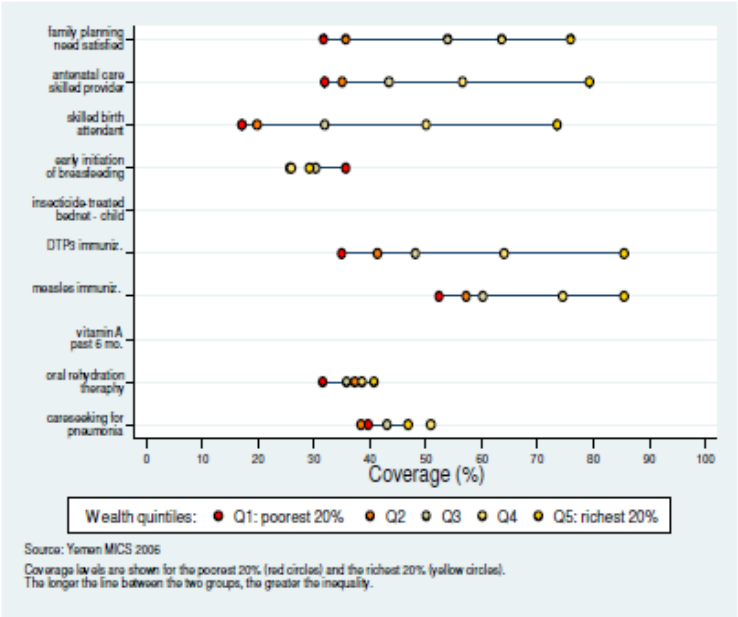
Statistics about human resources for health in Yemen are difficult to obtain. There is an exception with respect to midwives (thanks to a USAID and UNFPA-funded survey by the Yemen Midwives Association) which covers 20 out of the 22 governorates and estimates the latest count of midwives to be 6,233. The survey also demonstrated that there has been an increase in the numbers

[2] UNICEF 2011, Levels & Trends in Child Mortality - Report 2011, Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation

[3] http://www.countdown2015mnch.org/reports-and-articles/2012-report

over the past 10-15 years. Nevertheless, only 68% are employed, although some 12% work as volunteers or are self-employed (non-response rate of 9%).

Figure 2. 2012 Yemen Ewuity Profile: coverage levelrs in the 5 wealth quintiles for selected interventions along the continuum of care



This may explain recent rapid increases in attendance at delivery.

Equity in access and use of services is a major concern in Yemen as demonstrated by the Countdown report. Differences by quintiles are stark. Furthermore, use of skilled birth attendants is much higher in urban areas (at 62%) compared to rural areas (26%).

Also of concern is the high reliance on out of pocket expenditures to finance health services. Seventy five percent of total health expenditures are out of pocket. Only 4% of the government budget is dedicated to the health sector. Financial barriers to access are likely a significant problem in Yemen.

Gender

Traditional cultural attitudes in Yemen society limits women's access to resources more readily available to men and inhibits women's economic participation. Yemen ranks last on the economic participation and opportunity in the World Economic Forum's Global Gender Gap Index[4]. Early marriage is Yemen's biggest single development challenge, because it has a negative impact on maternal health, child health, girls' education, women's literacy and women's economic empowerment. Yemen's high fertility rate is linked to the husband's dominant decision-making role in family planning, pressure to have children as quickly as possible after marriage, and to continue doing so throughout women's fertile years. Low rates of contraceptive use are related to literacy, negative attitudes of husbands, availability and access.

Another gender facet of health care is the low number of women health care workers in rural areas. Studies have demonstrated that female patients are reluctant to use government health services because they are perceived as male-dominated and insensitive to modest behaviour[5]. Other gender issues in health include the practice of female genital cutting with between 10% and 20% of Yemeni women affected.

[4] JICA Yemen Gender Country Profile 2009

[5] http://www.weeportal-lb.org/content/situation-analysis-gender-and-development-yemen

Addressing gender in health programs is sensitive and often challenging although the needs are recognised. The National Strategy for Women's Development 2006 – 2015 is a strategic vision for goals and measures required to improve women status (including expansion of access to health care) and allow them to enjoy basic human rights and freedom to practice their developmental role and participate effectively in all aspects of life.

Donor environment

Given the level of need and poverty in Yemen, the country was, until recently, fairly neglected in terms of international aid. With the change in government in 2011, and new data collected on the magnitude of malnutrition and hunger in particular, the donor community seems to be giving more attention. Separate donor commitment meetings were held in 2012, including a Gulf Cooperation Council appeal in Riyadh in February 2012 and a "Friends of Yemen" meeting in New York in July. Most of the funding pledged is aimed to support the government's Transitional Plan for Stability and Development (2012-2014) including for post-conflict humanitarian assistance.

Most donors the team met were in the various stages of implementing fairly short term phases of their assistance programs. Many have aligned their cycle to the transitional plan timeline.

Prominent donors in Yemen are the World Bank, the various United Nations agencies, the European Union, the Dutch, UK and German governments and USAID. JICA may be coming back after a departure during the political events of 2011. We were not able to meet with UKAid.

We did not get a clear picture of how donors coordinate. USAID has in the past organized retreats of donors and the EU is planning one in the coming months.[6] We heard grumblings about duplicative and uncoordinated efforts (for example EU plans to support long-term consultant for HRH and to develop an HRIS, and WHO are also bringing in a one-month consultant to develop HRH strategy). WB, UNICEF, UNFPA and WHO seem to coordinate with each other and we heard of a number of joint efforts among them as well as jointly funded efforts involving other donors. Multiple donors are investing in the 2012-2013 YDHS.

UN and Embassy staffs are limited in their travel because of security (especially for expats, less restrictive for Yemeni national staff). There are exceptions for certain European donors who refuse to restrict in-country travel.

After humanitarian response, population and reproductive health sectors have reportedly been a focus of donor efforts, with less attention and limited support for technical updates in child health. The exception is the immunization program which is technically supported by UNICEF and WHO.

Given the current political situation in Yemen, USAID and other donors expects key indicators to be poor or even worse than before, so core MCH/FP priorities are unlikely to

[6] Security note: UN senior staff not allowed to attend meetings in any hotel other than Movenpick

change over the next 5 years. USAID's strategy for the next 3- 5 years proposes scale-up of lifesaving service delivery and commodity availability, and improved delivery of information to the population as well as increased attention to health system challenges.

Policy and Health System Governance

Policy Opportunities

Yemen has recently made some international commitments related to its health sector. For example, under the UN Secretary General's Every Woman, Every Child (EWEC) strategy, Yemen has committed to make contraceptives available free to end users and to reach 85% coverage of RH services, focusing on rural areas. To that effect, Yemen expects full coverage of RH commodity security. Also, Yemen pledged to increase BEmONC by 20% and full coverage of routine vaccinations.

Subsequent to political events and a change in the government, as well as new data on the extent of malnutrition in Yemen particularly affecting coastal areas, there have been new appeals for funding. A meeting of the Gulf Cooperation Council in Riyadh, Saudi Arabia, called on member states and charities to pledge funds for Yemen's reconstruction. A Friends of Yemen meeting in New York also raised monies for relief and development. To buttress these appeals, the new government has drafted a Transition Plan 2012-2014. While revisions are being made to this document, it lays out 3 priorities: 1) humanitarian and emergency response; 2) defining an essential service package and increasing access, availability and utilization; and 3) rehabilitation and post-conflict recovery.

The second priority is of particular interest to MCHIP to provide a framework for delivering a standardized package of integrated services.

From discussions with the European Union representative, we understand there is also donor support for helping the Ministry of Public Health and Population to develop an HRH strategy. Furthermore, the EU has committed to recruit a long term consultant to assist in developing a Human Resource Information System (HRIS), which they hope will capture not just the numbers and location of various cadres of health workers, but also be used to track continuous education and training.

The MOPHP also has elaborated on many strategies to guide and justify MCHIP interventions.

There is an overarching National Health Strategy[7] spanning 15 years to guide the work in this sector. It also provides a fairly honest assessment of the challenges in this sector and then organizes the strategy around the 6 WHO building blocks or elements of a health system. Authors have noted the absence of a community component in the WHO framework, but the Yemen strategy incorporates community participation as an element in governance and leadership, as well as in the health care services strategic axis.

[7] Ministry of Public Health and Population, 2010 "Towards better health for all through developing a fair health system" (National Health Strategy Yemen 2010-2025)

The team was informed that a review and revision of the Essential Medicine list is forthcoming within 2 or 3 months. The team shared links and documents related to the work of the UN Commission on underused MNCH commodities with as many stakeholders as possible[8]. The opportunity to further advocate for needed, scarce commodities should not be missed.

The 2011-2015 RH strategy is a comprehensive, well written document that details priorities and actions to accelerate progress towards achieving MDGS 4 and 5 and which integrates maternal and newborn health and family planning. It has 2 key objectives:

1. To increase the utilization of human rights-based maternal and neonatal health services, including EmONC.
2. To increase the utilization of modern contraception.

A draft nutrition strategy incorporates strategies for addressing iron deficiency anemia, maternal nutrition, etc. It clearly indicates the need for including zinc supplementation in the management of diarrhea.

Furthermore, a plan exists to extend community-based maternal and newborn care through community midwives (who are seen as vital), supported by community health volunteers.

The framework for this plan is reproduced here:

AT THE COMMUNITY	AT THE HEALTH FACILITY	OUTREACH SERVICES
CMWS PROVIDE	**HF STAFFS PROVIDE**	**CMWS & OTHER STAFFS**
• Focused ANC	• Focused ANC	• Focused ANC
• Essential Obstetric & Newborn Care	• Obstetric & Newborn Care	• Selected essential Obstetric & Newborn Care
• Essential Post-Partum Care	• Essential Post-Partum Care	• Essential Post-Partum Care
• Recognize, stabilize & refer obstetric & newborn Emergencies	• Recognize & treat OR stabilize & refer obstetric & newborn Emergencies	• Recognize, & refer obstetric & newborn Emergencies
• FP services	• FP services	• FP services
COMMUNITY PARTICIPATION		
• Solidarity Fund for transport		
• Mechanisms to cover cost		
• Community Volunteers		

From a gender perspective, a National Strategy for Women's Development (2006-2015) also exists and seeks to address issues around girl's access to education, early marriage, women's participation in economic affairs, decision-making and powerful positions,

[8] http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/life-saving-commodities

strategies to reduce and address gender-based violence and human rights, in accordance with Sharia laws.

While there is a dearth of reliable data now, the Yemen Demographic and Health Survey 2012-2013 is expected to begin data collection by the end of the year and issue a preliminary report by June 2013 and will include an assessment of maternal mortality, GBV and FGC. There may also be a Malaria Indicator Survey undertake at the same time.

Policy Barriers and Constraints

While there are policy opportunities, the policy environment is constrained by a number of issues, including: a weak regulatory environment, a fragmented and vertically managed set of programs from the central level that resist coordination across sectors and departments, lack of transparency, inadequate health information systems, poor capacity for planning at the central level.

- ***Regulatory environment***: Existing laws have been studied by advocates and make no mention of rights or conditions regulating access to services for women and children[9]. Though of note, a rights-based approach is mentioned in the NRHS 2011-15. Drafted by the Yemen Midwives Association and approved by the MOPHP, this was cited as a rarity in the Yemeni context of policies governing the scope of practice for health professionals in Yemen (see more under HRH below). A draft Safe Motherhood law has reportedly been prepared and is in front of parliament. Approval of this law was cited in the RH strategy with a target of 2011. While this timeline has not been met, advocacy continues.
- ***PHC and RH Guidelines***: Some internationally recommended practices are not yet reflected in national guidelines. For example, while it appears in the nutrition draft strategy, the treatment of diarrhea with zinc is not included in the PHC guidelines. Management of low birth weight neonates does not mention Kangaroo Mother Care. A protocol of best practices shared by the RH department had outdated management of newborn resuscitation and sepsis. Although our translation may not be completely accurate, a job aid produced at the RH department seemed to imply that LAM was effective until breastfeeding stopped, when pregnancy protection would end once other liquids or foods are introduced.
- ***HMIS***: There is no reliable system for data collected at the health facility level and district level to be shared with the central level. While a past USAID project with PHRPlus had created a very nice data base of health facilities in 5 governorates, this database has not been updated since 2006, although the files are still available on the MOPHP website. Internet access is a constraint for many Ministry staff.
- The ***lack of reliable data*** and lack of functional HMIS system has meant that past projects have set parallel data collection systems to be able to report to donors. (We saw one provider at a hospital still using separate BHS registers to track "best practices" (AMTSL), even while also capturing basic data in a hospital approved register. The USAID-funded BHS project ended in 2010.)
    - Reportedly, the immunization team does have comprehensive data from campaigns, where they have enumerated households. Similarly, the National Program Manager for the Malaria Control Program informed us that they have

[9] Afrah Al-Qershi, personal communication

GIS coordinates for all health facilities and, in some districts, households, as a result of their campaign to distribute bednets.

Planning

Central level planning is reportedly weak, and coordination across departments at central MOPHP is fraught. Each Governorate is expected to develop an annual 1 year workplan. As the team arrived in country, news of the departures of both the well-respected Population Sector Deputy Minister and the RH director were announced. While a new Deputy Minister has been announced (and the RH Director will remain in post until the end of the month), several donors have been advocating for integration to be reflected in the organogram of the Ministry. It is possible that reorganization will occur at the central level.

The Decentralization Law of 2000 empowered district-level councils (elected) and district health offices. Reportedly, especially where EU or UNICEF have worked, the district health team concept may be more operational and planning credible at that level. Under the EU project (which set up separate health development councils), there are interesting experiences with performance based financing and examples of strengthened HMIS at district level; they are worth exploring and documenting as potential examples to replicate.

Financing (including performance-based financing)

The percentage allocation of the budget for health is 3.6% according to the 2012 WB/UN Joint Assessment and last National Health Account survey. Budgets were very much delayed and some departments of the Ministry didn't receive their budgets until the middle of 2012. Budgets are clearly inadequate and government officials at many levels rely on donor-funded projects to carry out activities.

Salaries of health workers and ministry staff are low and allegedly an annual salary of the average health worker falls below the poverty line. Since the crisis, salaries have either not been disbursed or disbursed late although it appears many public sector staff also works in the private sector. Conditions were bad enough that CSOs and charities were providing aid to government workers, usually considered middle class, during the political crisis (WB, UN Joint Assessment 2012). This is often the justification given for not enforcing mandates for workers to work night shifts and maintain facilities open for 24 hours.

The World Bank 'Queen Sheba Safe Motherhood Project' has an interesting NGO and private sector model of care in Sana'a that includes a performance based financing component. This model was assessed mid-term and is currently under final evaluation. The team didn't have time to explore this project more fully and the report of the mid-term review was not available on the World Bank website.

Recommendations

- Explore using multiple department data to update the PHRPlus data base
- Seek to support and maintain the integrity of local council and health office coordination and planning functions

Human Resources

Figures and data on human resources are difficult to come by. The National Health Strategy provided a count of 12,227 nurses and 6,338 physicians in 2008 in the public sector. The Dean of the High Institute of Health Sciences (HIHS), first established in 1957 as a nursing school, estimated that 50% of non-medical staff had graduated from HIHS and offered a count of 20,727 graduates since they started to register them. They currently have 3,720 students pursuing education in two main campuses in Sana'a and Aden as well as in 10 branches at governorate level.

The Ministry of Public Health and Population's website offers the following human resource statistics[10] but does not offer a date.

Cadre	Totals
Physician Specialists	2623
Physicians (Bachelor level)	5787
Medical Assistants	5601
Bachelor-level nurses	308
Nurse technicians (12th grade/high school + 3 yrs)	3348
Nurses (9th grade +3yrs)	3944
Surgical nurses	400
Subtotal nurses	*8000*
Midwives (12th + 3 yrs)	174
Community midwives (9th grade + 2yrs)	6434
(Sr.) Comm midwives (9th grade + 3 years)	36
Other midwife (9th grade + 4 years)	93
Subtotal midwives	*6737*
Lady Health Guides	1272
Laboratorians (Bachelor level)	776
Lab technicians	6228
Pharmacists	834
Pharmacy technicians	10920
Dentists	1503
Dental assistants	543
Dental technicians	874
Anesthesia technicians	406

Note that the Yemen Midwives Association conducted various governorate level surveys of midwives between 2006 and 2011 (see report) and counted 6,233 midwives in the final report issued in December 2011.

HR are concentrated in urban health facilities and private centers. It is widely accepted that the rural areas are deprived of HRH and there is a lack of mechanisms (recruitment & retention strategies) that motivate and encourage skilled personnel to move to the rural areas.

[10] See http://www.mophp-ye.org/english/Yemen_HRH_Observatory.html (*note translation carried out by Google translate thus unreliable)*

The situation is further exacerbated by a lack of staffing standards for MNCH/FP services by type of facility or levels of the health system. Reportedly, such standards existed in the south before unification, but have not been followed since then.

While there is a Yemen Medical Association, there does not seem to be any societies for specialists. There is not even an estimation of numbers of specialists in Yemen. Many specialists operate outside of the public health sector. There is also a Public Health Association.

Given HRH is one of the 6 key pillars of the health system[11] and there is currently a lack of reliable data on existing HR in Yemen, the planned HRH strategy meeting (Nov 2012) is clearly needed as well as activities to assess the current workforce and workforce planning needs.

Recommendations

- Consider 'midwifery workforce' modelling /planning activity (as recently conducted by the HBCI on behalf of the H4+)
- Rationalise health cadres (for example, following a task analysis to better understand the practices or tasks of health workers in the health care system)
- Advocacy for task sharing/shifting especially frontline health workers
- Key learning's on community level workers
- Scale up community-based care

Pre-Service Midwifery Education

Midwives have been educated in Yemen since 1977 (nursing was established in Aden in 1957). The Health Institute of Health Sciences (HIHS) is the responsible body within the MOPHP for PSE of all but medical doctors. It also has a unit for in service training. The director (Dr Taha) reports directly to the Minister of Health. The HIHS trains various health providers in nursing and midwifery and others in allied health (including nurse anaesthetists). There are 2 central HIHS (Sana'a and Aden) and branches in 10 Governorates. Approximately 1/3 of students overall are female and as part of the continuous quality improvement process in place a gender policy is being developed (integrated from National Gender Policy). Currently there are various midwifery training programs – some of these reflect differences between the 'north' and the 'south' prior to unification for example the south has higher educational prerequisites.

[11] WHO (2006) *Everybody' Business –Strengthening Health Systems to Improve Health Outcomes*

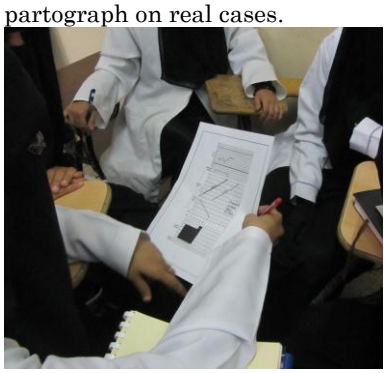
Community Midwifery	9 years education	3 years training (to allow recognition by CSO as a sec. school level certificate)
Midwifery	12 years education	3 years training
Nurse Midwifery		1 year after 3 yr nursing[12]
Midwife 'supervisor'		1 year post basic

The HIHS appreciates the need to train a rational number of students to address quality and currently in Sana'a there are 20 students in Yr 2 and 27 in Yr 3. The midwifery curriculum is currently under review and a consultation meeting will be held in November 2012 (with TA from WHO/EMRO) to finalize the program specifications and that of various courses within it. Subject experts and other stakeholders are developing the semester outlines around framework of intended learning outcomes.

Observations of HIHS

- Midwifery is neglected in budgets by MOF (as is the school in general), but many partners are interested - funds cover food, accommodation & transport
- Classrooms have basic equipment
- Some skills labs are present. Midwifery lab has one Gaumard childbirth model, wall charts and adequate anatomical models (depending on number of students working at a time)
- Students have limited clinical time and opportunities for practice. HIHS has a 'training health center' (days only)
- The curriculum is based on 40% theory, 20% skills lab and 40% clinical
- Teaching is in Arabic & English
- HIHS receives technical and funding support from Maastricht University; UN agencies (WHO, UNFPA); USAID – fund MW training; NUFFIC; SFD (building, equipment and capacity building)
- Interested in adapting the model and curriculum and training materials of the Community Midwifery Education program from Afghanistan which has been shared with WHO and HIHS
- Curricula are supposed to be reviewed every 3 years (last review was 14 years ago)
- Private midwifery schools exist outside the system – no oversight and it is not clear where privately trained MWs are deployed as they are not recognized by MOH

During our visit, Yr 2 student midwives were doing group work on the partograph – none of them had experience of caring for a woman in labor or use of the partograph on real cases.



[12] This program is no longer being offered, but this cadre can be found in the workforce

- The lack of a regulatory system (and no licensing exams) means there is no record of levels of competency of graduates
- Regulations exist for preparation of midwife teachers (years of experience required are stipulated and they complete a specialized Diploma in Teaching Methods)
- HIHS requested support in 3 main areas – skills labs; capacity building of staff (knowledge and skills updates) and printing of resources. They also expressed interest in learning about innovations in training, for example, objective structured clinical examinations (OSCEs)

Observations of student midwives in the health facility

Both in Sana'a and Amran facilities, our team came across student midwives. Through questioning of these students, we learned that:

- Students responsibilities in clinical care are limited and may well be observation only for some skills
- They have a logbook, but it does not track competencies
- They perform a limited number of deliveries (15 in 3yr program)
- Limited opportunities for night shifts /weekend work and there were many complaints about 'too many students; not enough cases'. This can be addressed with commitments to organize student placement over 24/7 to reflect actual service provision. The HIHS tried providing incentives to providers to act as clinical preceptors during night shifts, but this did not work. So they now either send their own staff with students or contract out providers to accompany students.
- The YMA supports refresher training of midwives. They say PSE very weak – e.g. many cannot do AMTSL.

Recommendations

- Standardize 1-2 routes into PSE midwifery with post basic options and a career path for midwives
- Support transition to competency based training
- Advocacy and make tools available for standardization clinical training sites
- Ensure HII are reflected in the new curriculum and training materials

In-service midwifery training

Many respondents were quite frank about the limitations of in service training in Yemen. Their comments can be summarized as follows:

- Trainings are infrequent, vertical (other than PHC package which integrates RH, EPI and IMCI) and generally not skills-focused/competency-based
- Different packages have been developed for doctors and MWs for BEmONC (from a previous unified one – reason is unclear but this change came from the MOPHP)
- Major GAP – post training follow up and supportive supervision; tools; performance review

Recommendations

- Develop and introduce an integrated supervision checklist
- Strengthen government supervision structures

- Develop OTJ materials to include clinical standards and job aids
- Standardization in HII and strengthening of master trainers
- Innovations in teaching /learning – short courses (e.g. PE/E); blended learning; e-learning

Midwifery in Yemen

The Yemen Midwives Association (YMA) became a member of ICM[13] in 2011 —a significant achievement and reflection that they have met a minimum level of requirements. The Board of the YMA is comprised of 7 officials (4 in Sana'a and 3 in other governorates) and they meet every 2 months. The association is governed by a constitution. A general Assembly and elections are held every 3 years. Current membership exceeds 3,000, although YMA officials say members complain about the fees and some do not pay (100 YR/month). There are branches in 20 governorates and fees are retained at the governorate level. The President and Secretary General are both retired, though they may accept consultancies and, in the case of the Secretary General, provide clinical services. The treasurer is on faculty at the HIHS.

The association's activities: They have supported the establishment of 130 private MWs in 10 Governorates with support from both USAID (CLP and BHS) and UNFPA. They offer refresher training (best practices, EmOC, NBC) in their offices.

Recommendations

- Support ongoing professionalization as strengthening midwifery is seen as a priority in the RHS
- Use State of World's Midwifery Report (UNFPA 2011) to advocate for strengthening and investing in midwives
- Work with YMA to undertake formative research and interest in developing a career framework for MWs – e.g. post basic degree
- Advocacy for regulation – the next step for strengthening nursing and midwifery in Yemen[14] (cannot be done by YMA) along with support for ICM 3 pillars[15]
- YMA – Support ongoing capacity building; restructure to include a 'business arm' (salaried staff)
- Support YMA to develop programs in continuing professional development

Service delivery

The organization of health services

The District Health System (DHS) is based on three levels of health facilities, which are the Health Unit, Health Center and the District Hospital. Two higher levels of health care provision such as Governorate Hospital and Central Hospital function as referral levels for

[13] The International Confederation of Midwives
[14] ICM/WHO Global Taskforce on Midwifery Regulation
[15] http://www.internationalmidwives.org/Whatwedo/Policyandpractice/CoreDocuments/tabid/322/Default.aspx

the DHS. Each health facility in the DHS is supposed to be managed by a Health Facility Committee (HFC). Community-based health services and services provided through mobile clinics are usually linked to a health facility. A District Health Management Team (DHMT) manages the DHS as a whole and is located at the District Health Office (DHO). The DHMT receives support and supervision from the Governorate Health Office (GHO).

Equal distribution of resources and provision of human rights-based health services and ensuring that every individual can access them is a vision of the National Health Strategy. The MOPHP provides its primary, secondary and advanced health care services through a network of units, health centers, public hospitals, specialized hospitals (see textbox). Yet many areas remain uncovered, and women and families in remote rural/insecure areas are especially marginalised.

The public health sector is organized in four levels.

1. The first level consists of 2849 primary health care units and 791 health centers;
2. the second level consists of 175 district hospitals,
3. the third level of 53 general hospitals
4. the fourth level of 2 specialized referral hospitals.

Nearly 80I of these facilities are in the rural areas, where about **20% of the human resources are working**, while 201 of health facilities are located in urban areas, where **80% of human resources** are working.

According to data from the governorates, only 601 of these facilities provide RH services.

In addition, there are significant numbers of private hospitals and clinics but they are concentrated in urban areas and are primarily commercial enterprises for profit. (WB/UN Jt Assmt, 2012)

Our team was not able to visit a PHCU to understand what type of facility these represent. The health system has tremendous difficulties in optimizing the performance of human resources as exemplified in few facilities offering care at night. The challenges of HRH are weakening the level and quality of service provision indicating weak governance and a gap between policy and practice.

Implementation of existing policies into a more mature phase (such as high coverage) to ensure institutionalization and sustainability are a challenge at times of transition and insecurity.

Essential medicines and equipment

Facilities reported universal scarcity of contraceptives and key drugs (e.g. few women receive IFA during ANC). This was corroborated by document review.

A reasonably functional drug revolving fund system was abolished by government decree about 5-6 years ago, yet the budget was not increased to compensate in providing free commodities. While remnants of this fund survive (and one governorate health office refused to comply with abolishment), this is commonly regarded as a huge step back for access.

UNFPA has started a large procurement of contraceptives, which is expected in country in 1-2 months. Yamaan also procures and has stocks under bid right now – for distribution through social marketing, and social franchising. DELIVER has short-term funding to establish an office and provide TA to improve FP supply chain. Provision of a limited set of maternal health commodities through the contraceptive supply chain is possible, but has not yet been confirmed.

Other commodities such as zinc seem to have fallen through the cracks. The PHC supply chain is weak.

The best functioning separate supply chain exists for vaccines for EPI. This has been supported by UNICEF.

Al-Sabeen Hospital in Sana'a appeared to have adequate supplies for routine AMTSL and emergency management of severe PE/E with MgSO4.

User fees

Health facilities generally report the services are free, but when follow up questions are asked about the lack of key drugs, they admit that they ask the family to buy. In Amran hospital, we suggested to the Deputy Director that an emergency stock be restored in the labor and delivery room, because this practice had stopped. Contraceptives and births are said to be free in public sector, but small fees were reported for supplies or prescriptions given to family members when supplies run out.

For midwives operating through a private practice model, there was discussion of a standard fee schedule, but that was abandoned when consensus could not be reached. Reportedly, midwives have a strong social consciousness and "90% of them" will offer free care to indigent clients. CLP reports that in some cases, they did so much free care that they couldn't sustain their practices.

A culture of polypharmacy with high out of pocket expenditures persists. We encountered clients with hefty bags of pharmaceuticals in facilities, many of which, such as vitamins, are superfluous.

There was no opportunity to explore 'unofficial' user fees.

Mobile health teams or Outreach services

Many projects have used this model to reach the roughly 40% of population without access to health facilities or in catchment area of facilities that are not functioning. Typically, a vehicle is equipped with drugs (although we had the opportunity to visit one right as it was leaving and it had NO DRUGS) and supplies and a team comprised of health workers of various composition. The vehicle and team travel to remote sites and clinics (often government clinics that are no longer functional) and offers a range of integrated services. Limitations of this model are for maternal and newborn care and IMCI. But they have been shown to increase coverage of immunizations and FP. The major drawback is cost, which needs to be supported by donors or NGOs, and this is not sustainable.

Public-Private Partnerships

A number of public-private partnership models exist in Yemen.

Voucher Scheme

Yamaan, with funding from KFW and the World Bank (among other donors) has been preparing a scheme for over two years which would provide care as well as transport for women who access care from qualified providers during pregnancy and childbirth or for themselves and their infants in the postnatal period. This scheme will be launched in November of this year in 5 governorates. The current MOPHP RH Director will be the Director of the scheme within Yamaan. While Yamaan is implementing the scheme, a separate organization will carry out the audit function to verify that payments are valid. Providers are to reimburse women and their families for transport at the time they access services and then claim for reimbursement. This scheme should help provide financing for care of women, where the current system fails to provide support for facilities that offer maternity services.

Home/Community-based maternal and newborn care model

UNICEF has supported a community midwife scheme whereby unemployed community midwives are working as volunteers, but are linked to public sector facilities or DHO for supplies and data reporting purposes. They mostly provide home-based services in areas where no facilities exist. This Community-(formerly Home-) Based Program aimed at MNC has been implemented with the support of UNICEF in demonstration districts since 2007 with some success. This program has been adopted as a national strategy (NRHS) and is being scaled up to other districts, which is likely to increase the coverage of SBA.

This picture tells a nice story of a birth when the family thought the baby was born dead. But Arwa, the private midwife revived the baby and took her to hospital. Mom, Hakima, is holding the picture of little Djenat in incubator.

Private sector services

Typically, services in public sector facilities are only offered in the morning and providers attend their private practices in afternoons and/or evenings. NHA data shows that 70% of health expenditures are out of pocket, demonstrating a large reliance on private sector services for care, bypassing nonfunctional public services. (Note, the Queen Sheba model was described earlier and, thus, is not repeated here. It is more of a completely private model in any case)

Social Marketing products are available in 10 governorates. Yamaan operates this program but collaborates with a private sector distributor to distribute product to retailers. Yamaan manages about 4 supply chain systems for contraceptives, including their own field coordinators in each governorate. These field coordinators handle detailing, monitoring and evaluation of sales and some distribution. Yamaan also supplies NGOs. About 60% of commodities go through the private sector distributor (who then also has a percentage go to lower-level wholesellers) and 40% is directly distributed by Yamaan.

Social Franchising model for private Midwives: Yamaan and MSI have established 180 MW clinics using a rigorous model of training, supply and supervision for quality. Social franchised MW also carry out outreach services.

As mentioned above under the midwifery section, BHS and then CLP supported establishment of ***private midwife clinics***, including refurbishment of space in MW's home, supply and training. Supervision of MW operations is much weaker under this model. Also, in some cases clinics were established for midwives who also perform in a public sector health facility in the morning.

USAID are interested in exploring a public private partnership model of ***pharmacies housed within public sector facilities***. As noted below under child health interventions, there may be an opportunity to train drug sellers in counseling and IMCI protocols in underserved areas. Potentially this could be carried out by expanding Yamaan's social marketing program and training to also include water purification, ORS and zinc.

Note: Yamaan has a business plan and 5-year strategy where first 3 years are focused on consolidating RH capacity and system (including operationalizing and scaling the Voucher Scheme). While they expressed interest in using their distribution network for non-RH commodities, they are very clear of need for TA for this.

Factors affecting the coverage and quality of MNCH/FP services

As noted throughout there is marked inequity in access to MNCH/RH services a situation which is worsening due to insecurity in some areas. The quality of and access to services is variable – for example, the unmet need for EmOC is acknowledged in the NRHS with only 5 governorates out of 21 having a C-section rate above 2% and 13 governorates that did not reach 1%. A few EmOC assessments have been undertaken (3 available in English) but they vary in quality of data and exclude the 7th signal function, newborn resuscitation. Lack of commodities almost certainly affects utilisation, for example in ANC where few women receive the full package of recommended services, including IFA.

There have been mixed experiences of actively involving the community in service provision (recommended in NHS[16]). The Quality Improvement Program (QIP) implemented by GIZ addresses this and has been key to institutionalization of services (as noted in visit to Amran Family Health Centre)

The definition of an integrated and essential package of services, while it was promoted for years unsuccessfully, seems to be on the agenda of the transitional government and now prioritized as part of the transitional plan. Already, the PHC sector has shown success in developing integrated training, with family planning and reproductive health represented, but it was unclear how this is operationalized beyond the training aspects. Service delivery models are very fragmented. An example we observed is that two different providers offering ANC: a nurse checks weight, blood pressure and other vital signs, then the client

[16] Ministry of Public Health and Population, Yemen National Health Strategy 2010-2025

moves to the next desk to consult with a physician. It is unclear which provider if any provides any birth preparedness counseling.

Community structures and involvement in health

Current policy documents recognize that for Yemen to meet the MDGs, especially 4 and 5, care has to be taken closer to the community, including family planning, skilled attendance at delivery and emergency obstetric and neonatal care. Yet despite this, efforts to provide community based care are slow with no efforts relying primarily on the community midwife cadre. Furthermore, the continuum of care and referral systems is weak. Perhaps due to political pressures from the middle and upper classes, curative care is given a lot of attention and reportedly takes up the bulk of the MOPHP development and drug budget, at the expense of prevention and primary health care.

District councils: While on paper, council members are elected for a 4 year term several elections have been canceled so parliamentarians and councilmen and women have been in office for a decade or so.

Tribal community systems: Yemen's community structures are primarily tribal, with villages headed by a Sheikh who may operate his own informal militia. Save the Children operates at large scale at community level and engages and ensures tacit support from tribal and community leaders. For the most part, sheikhs have no objection to NGOs and INGOs operating in their community and can be called upon for assistance.

Volunteer committees to monitor/oversee health facilities: While this structure exists in the national health strategy, it is unclear how operational it is in reality. Under WHO's Basic Development Needs (BDN) project, they have experimented with operationalizing this model. The committee is made up of a teacher, village leader, user, etc. An evaluation of this project is forthcoming. So far, it has been tested in 25 communities only, many of which had a past experience with a microloan project.

Women's groups: Yemen Women's Union is a strong organization with activities at local level (for example track record in social mobilization against early marriage under the BHS project). The team did not meet with them directly. However, NSMA is currently housed in YMU facility in Sana'a.

NGOs and CSOs: A small number of NGOs operate in Yemen. The team did not explore an exhaustive list. Meetings were held with Yamaan, NSMA and YFCA. DFID and the WB support an NGO called SOUL.

The Social Fund for Development: A parastatal organization is mentioned in many project documents. The World Bank UN Joint Assessment report describes it as thus:

> *The SFD was established in 1997 and contributes to reducing poverty by increasing the access of poor communities to basic social and economic services, building the capacities of local partners, and empowering communities and local authorities to implement developmental works. The SFD seeks to achieve these goals through four multi-sector programs:*
>
> - *Community and Local Development;*
> - *Small and Micro Enterprises Development;*
> - *Capacity Building;*

• *Productive Safety Net Labor-intensive Works Program (LIWP).*

From 1997 to December 2011, SFD implemented 12,047 projects in all sectors worth US$1.44 billion; more than 70 percent of this amount was disbursed.

Community Health Workers

As mentioned earlier, the MOPHP has developed guidelines governing the use of volunteers in health programing. But there are many precedents for volunteers in community programs in Yemen. One example comes from a UNICEF program, however, the MOPHP rejected the parallel training and management system of that project. Other programs have used volunteers as community-based distributors of pills and condoms, which for example GIZ continues to support (but only resupply for pills, as women must first be screened for medical eligibility at facility level). Finally, a senior MOPHP official spoke glowingly of a JICA program that developed a more polyvalent cadre of volunteers in 6 districts but which was slowed and not yet evaluated as a result of the political crisis.

Motivation/incentives for CHVs are under consideration and is a 'grey' area despite evidence of volunteers in similar settings. The WB have requested a review of the proposed CHV 'package of services'.

Another type of CHW is called Murshidah/Murshed (means teacher or guide in Arabic): these are a health education cadre developed in 70s, but not well supported. A senior government official advised against working with this group.

Behavior Change Communication efforts

While our team encountered and were given many examples of BCC materials, we were unable to either review these in detail because of language or to really explore in depth how these were used in the field. Examples of materials developed by Yamaan, NSMA, YFCA and Pathfinder can be obtained from the team. Also, the team was unable to meet MOPHP Health Education director, but this is reportedly a priority for the former Deputy Minister. We did hear that the RH Directorate takes the lead on RH-specific messages and materials.

For safe motherhood: the National Safe Motherhood Alliance (NSMA) also has developed communication materials and uses a cartoon style for their graphics. Their focus is dual on raising community awareness about safe motherhood and advocating for attention on the issue. They have used stories as a vehicle for communication. Their cartoons are often humorous (though about non-humorous issues).

We also understood that there was strong capacity in Yamaan for BCC and indeed they were a partner under BHS as well as an implementing partner of UNFPA for demand creation. Other NGOs were not assessed, although we saw posters in health facilities with the SOUL logo.

USAID's current bilateral partner, Communities Livelihood Project (CLP) expressed willingness to share all materials already produced.

The UNFPA Country Action Plan for 2011-2015 specifies plans to work on a new KAP survey and communication strategy in order to increase demand for family planning and maternal and neonatal health.

Recommendations

- Ideally, MCHIP could justify a sole sourced agreement with Yamaan for some of the BCC efforts as well as other activities to be detailed further below.
- Coordinate with UNFPA on BCC activities and in particular if MCHIP will be involved in a mass media program.

Advocacy

We understand that the National Safe Motherhood Alliance (NSMA) has capacity in this area. Indeed, they reported to us the use of multiple approaches centered on an advocacy plan with specific objectives. Approaches used include meetings with decision makers, community education and awareness raising (see above on storytelling as a strategy), interest by a young volunteer in use of social media.

The former IPPF affiliate – Yemen Family Care Association (YFCA) is also engaged in advocacy and has a program officer charged with this area. She briefly described the organization's role in researching the legal texts and advocating for a Safe Motherhood Law. YFCA is a member of NSMA as well.

Recommendations

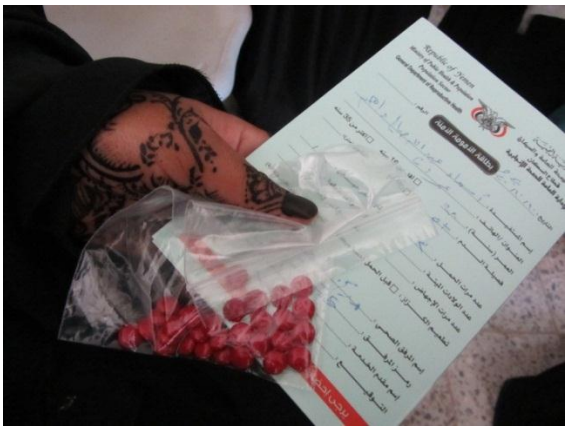
- MCHIP should engage existing CSOs active in advocacy around reproductive and child health in particular when it comes to technical updates and advise to government on health policy issues.
- There may indeed be scope to fund the activities of these groups who clearly need financial support for their advocacy work.

High impact MNCH Interventions

Focused Antenatal Care (FANC)

Pregnant women should receive high-quality, focused care from competent health care providers to ensure healthy outcomes for women and newborns. ANC is a key entry point to a broad range of health promotion and preventative health services, including nutritional support and prevention and treatment of anaemia; prevention, detection and treatment of malaria, tuberculosis and STIs/HIV/AIDS and tetanus toxoid immunization. ANC is also an opportunity to promote the benefits of skilled attendance at birth, as well prepare for complications and to encourage women to seek postpartum care for themselves and their newborns, including improving uptake of PPFP. Screening for pre-eclampsia is one of the key components of ANC services that can translate into saving women's lives.

The limited ANC observed indicates a fragmented, task orientated service and women were referred to labs for investigations. A doctor sees every woman, which is not required except in complicated cases. Staff state history taking is problematic yet there were many staff & few patients. Ultrasound scanning is common and possibly not clinically indicated – of note, all HF visited had scanners. A national ANC card held by woman has record of ANC and summary of birth details.



IFA: Iron was not available yet folic acid is and is given until the 5th month pregnancy. Deworming is not routine (WHO recommendation in second trimester) and there was anecdotal report that worms are endemic and possibly linked to unwashed khat.

Syphilis screening is not in place but screening for toxoplasmosis is. Counseling and testing for HIV is not routine (with a prevalence of 0.1-0.2%). There are 4 + testing centers in Yemen (in hot spots of Sanaa, Aden, Mukalla and Taiz). One facility visited (YFCA RH center) offers PICT and refers in the event of a positive test. There are only 2 + cases recorded to date and HIV remains essentially within MARP.

MIP: IPT is not routine. 3 days combined Rx of Fansidar and Artemesin is given in 2nd trimester only in endemic areas (Plasmodium Vivax) and considered to be 100% effective[17]. Campaigns are ongoing for universal coverage of ITNs.

FP counseling during ANC reportedly done in facilities visited.

Recommendations

- Standardize & disseminate job aids and health education (IEC) materials
- Support availability IFA and Mebendazole/Albendazole for deworming
- Expand Calcium supplementation within nutrition package – possibly routine supplementation given severe malnutrition and perceived high prevalence of PEE (2-3 cases per day in Al Sabeen hospital)
- Rights based approach /GBV (recognition & referral to specialized care) to be included
- Home based BP/CR
- Misoprostol distribution at 8 months *(link to prevention PPH program)*

Skilled Birth Attendance and Essential Maternal and Newborn Care

The recognition that deliveries by SBA should be increased is recognised by the MOPHP as well as need to improve access to EmONC. The following summary is based on limited observations and discussions with providers.

[17] Personal communication WHO Yemen

Care in childbirth: A package of 'best practices' was identified in 2007 including AMTSL, immediate and exclusive breastfeeding, KMC, Postpartum FP and healthy timing and spacing of pregnancy, prevention of neonatal infections, newborn immunizations (BCG and polio) and newborn resuscitation[18]. To date 5 of these were considered to be in place. The 8th best practice was the provision of Vitamin A to mothers after delivery. Many providers proudly mentioned it as one of their best practices and were not aware that WHO no longer recommends this practice.

By all accounts, AMTSL is now routine (in public HF with Oxytocin 10iu). Misoprostol is also used by CMWs who procure it in pharmacies; it was not clear if delayed cord clamping is practiced.

Support persons (considered beneficial) are not 'allowed' in public health facilities – support persons were observed in labor room in YFCA, but not in the delivery room (where the young mother looked like she might have benefitted from this). As in many countries, the lithotomy position is commonly used[19] for births. There was no data on episiotomy use but staff report using it often such as in primigravidas – and they were not aware of evidence based indications for performing it.

Immediate postpartum & newborn care is weak and ongoing postnatal care appears non- existent. Typical postpartum stay is 2 hours – there are no beds or postnatal wards except for Caesarean Section cases. BCG is routinely given prior to discharge.

We didn't observe any births, but came upon the immediate postpartum period of a birth in the YFCA maternity. Prior to that we heard conflicting reports from clinicians as to how they handle newborns. While warming and drying, placing baby on mothers chest were frequently mentioned, as well as immediate BF of stable babies, delayed bathing was not mentioned at all. Counseling on danger signs is not strong; it seems this is an area needing standardization and clearer standards. In the birth we did see, the baby had been placed on a warmer (not turned on) and was lying uncovered and not very dry, while the health worker was busy with the mother several feet away.

Postpartum/postnatal visit within first 2 days

There is a complete absence of PNC for mother or newborns in health facilities. Women rarely stay for even two hours. The family waiting outside is frequently cited as a reason for the rapid departure and a lack of awareness among the community and providers on possible maternal and /or newborn complications in post natal period. Midwives in Sana'a reported giving counseling on care of mother and newborn (including clean and dry cord care). The private midwife we met reports doing home visits only for women with difficult labor and birth. For other mothers, she follows up by phone. Phone consultations where any concerns are reported seem to result in advice to go to hospital. Compliance with referrals in Sana'a is reportedly good.

[18] Extending Service Deliver project, 2010, "Accelerating the Spread of Best Practices in Postpartum Care; Scaling up Best Practices in Yemen"

[19] Private MWs may be more flexible – the one we visited offers a choice of positions, support persons although the environment even at that private clinic is clinical

No follow up on screening for anemia or IFA distribution to postpartum women was reported.

Recommendations:

- Operationalize new WHO guidelines[20] on PNC & adapt to Yemen context to include counseling on HTPs (FGC[21], feeding) IYCN; early recognition of postpartum depression/psychosis
- Strengthen support for and implementation of early and exclusive breastfeeding:
    a. Assessment findings note this is included as a best practice; staff say they do but thru other sources they do not practice skin to skin or BF as 'too busy'
    b. YFCA health facility had excellent IEC materials on BF, weaning & nutrition
- Attention must be paid to maternal and infant and young child nutrition (according to Joint WB/UN Assessment, 1 in 3 households is food insecure).

Basic and Comprehensive Emergency Obstetric and Newborn Care

Along with skilled attendance at birth, access to Emergency Obstetric and Newborn Care is essential to reduce maternal mortality[22].

Basic Emergency Obstetric and Newborn Care (BEmONC)

1. Parenteral antibtiotics
2. Parenteral oxytocics
3. Parenteral anticonvulsants
4. Manual removal of the placenta
5. Removal of retained products
6. Assisted or instrumental vaginal delivery
7. Neonatal resuscitation

CEmONC – all the above +

8. Blood transfusion
9. Cesarean delivery

BEmONC is not clearly understood in Yemen. There are varying levels of functionality and the main gap is 24/7 coverage. Assessments in selected 3[23] Governorates showed an unacceptable lack of many Basic and Comprehensive EmONC signal functions both at hospitals and at HCs levels in all targeted governorates and significant unmet need for EmONC. Caesarean Sections rates are below the minimum recommended level of 5% and this also contributes to obstetric fistulae which are a problem in Yemen due to higher levels of teenage pregnancy. Of note there will be a Fistula module in the upcoming DHS.

In the same assessments there were 864 cases of direct obstetric complications reported (for 2009) and 88% of them were registered at hospitals. Hemorrhage was found to be the first

[20] In draft form
[21] Female Genital Cutting (FGC) is strongly linked to biased religious beliefs of certain population groups and deeply rooted in specific Yemeni costal societies. The 2008 Situation Analysis on FGM in Yemen reports that newborn girls are still victims of genital mutilation in Yemen.
[22] Lancet Maternal Mortality Series 2006
[23] EmONC, Family Planning, and Maternal and Neonatal health Best Practices Needs Assessment Survey for Amran, Marib and Shabwa Governorates May 2010

registered direct obstetric complication (43%) followed by obstructed labor (21%) and pre/eclampsia (19%). With regard to indirect complications, anemia was found to be the first registered indirect obstetric complication (83%) followed by malaria (5%). The lack of commodities was again emphasized, for example, the essential anticonvulsant Magnesium Sulphate, was only available at 17% of hospitals and 9% of HCs[24].

During a visit to Al Sabeen hospital:

- Post abortion care (PAC) is in place using MVA and occasionally misoprostol. Room clean, well organized and midwives can perform MVA after training
- Pre-eclampsia /eclampisa (PEE) – Al Sabeen say 2-3 cases per 24 hrs which seems high and possibly linked to malnutrition. Inadequate loading dose magnesium sulphate (MgSO4) is noted in clinical protocols (4gm IV); staff see anti-hypertensives (available) as equally important; some HF such as Al Sabeen have an ICU for serious cases. MWs refer cases PEE without giving loading dose of MgSO4.
- General lack of clarity on signal functions e.g. MWs say they cannot do vacuum delivery BUT they also note if they have not been trained/deemed competent they should not do.

Prevention of PPH

Following advocacy efforts by various stakeholders since 2009 led by Dr Jamila, work is progressing to develop a program for prevention of PPH at community level. In brief:

- The High Supreme Court have given agreement to Yamaan to procure 100,000 tablets of miso for a training/learning phase, with precondition that it be handled through community midwives as a first step;
- Procurement already started through Yamaan, and expected arrival in country in November. Small study already completed in Sabeen hospital, results being edited (copy of report has been requested). Yamaan requested technical and implementation support from MCHIP
- Process underway to include miso on EML, as a revision of EML is planned before end of 2012.

Recommendations

The main recommendation is to increase coverage of proven MNH interventions by:

- Standard Delivery Guidelines for EmOC reviewed and updated
- Ensuring competency based trainings and tools for post training follow up in place
- Implement the learning phase of comprehensive PPH program

[24] EmONC, Family Planning, and Maternal and Neonatal health Best Practices Needs Assessment Survey for Amran, Marib and Shabwa Governorates May 2010)

Essential Newborn Care

It is recognized that little attention has been given to NBC in Yemen and that progress towards MDG4 will only be achieved when newborn mortality is reduced. There is no registration of births and deaths. An overview of the 3 main causes of newborn death – asphyxia, low birth weight & sepsis follows.

Prevention and managing birth asphyxia

We noted only ad hoc use partograph, most notably by the private midwife in Sana'a (supported by BHS). With respect to newborn resuscitation, we note that:

- The 'best practice' protocol for NB resuscitation shared by MOPHP is not consistent with HBB or WHO.
- Facilities are unable to produce good neonatal ambu bags, even at Al-Sabeen referral hospital. Some are damaged e.g. face mask wrong size
- In hospitals, oxygen therapy was mentioned often as important in resuscitation
- Facilities have a newborn care area (Al Sabeen hospital has a resuscitaire) and some equipment (though no clocks)
- Mechanical suction is used (private MW had simple bulb suction)
- In HF that have pediatric staff, the maternity workers call them for asphyxiated babies

Low Birth Weight (LBW)

Low birth weight, a major cause of neonatal mortality and disability, is around 32% for the period 2000-08 according to WHO estimates while it was 45% in the 2003 National statistics report, a figure coming from the 2003 PAPFAM[25].

In the HF visited, there was inconsistent reporting on LBW. Thankfully, the private MW did record the incidence in her register.

Hospitals typically have incubators and the special care units visited (Amran and YFCA) focus on care in incubators. During our visit, KMC was frequently mentioned as a "Best Practice" for which people have been "trained". However, in actual fact, this only consists of counseling and maybe a demonstration of how to wrap baby and the practice is to be performed at home. No Sana'a or Amran hospital or health center has a KMC unit or encourages the practice at the facility.

Administration of antenatal corticosteroids (to assist maturation of fetal lungs) is noted in SDGs and mentioned in relation to managing PEE in Al Sabeen hospital.

Vitamin K IM routinely administered to babies admitted to SCU.

Newborn sepsis

Management of sick newborns has reportedly been integrated into IMCI.

[25] Yemen National RHS 2011- 2015

Given that there is no PNC, we can safely assume delays in recognition. Midwives in Sana'a typically refer cases of LBW, sepsis, without management. When asked what drugs they had, no provider included gentamycin.

Recommendations

- Strengthen prevention and management preterm labor (e.g. expansion use of antenatal corticosteroids)
- Implement HBB as integrated training and cascade – ensure complemented by distribution simple suction, bag & mask including to Community MWs at community level
- Establish KMC sites
- Review and update IEC materials on NB danger signs
- Need updating of protocols for managing NB resuscitation, sepsis and LBW, with clarifications of what cadre can perform what management at what level facility

Children under 5

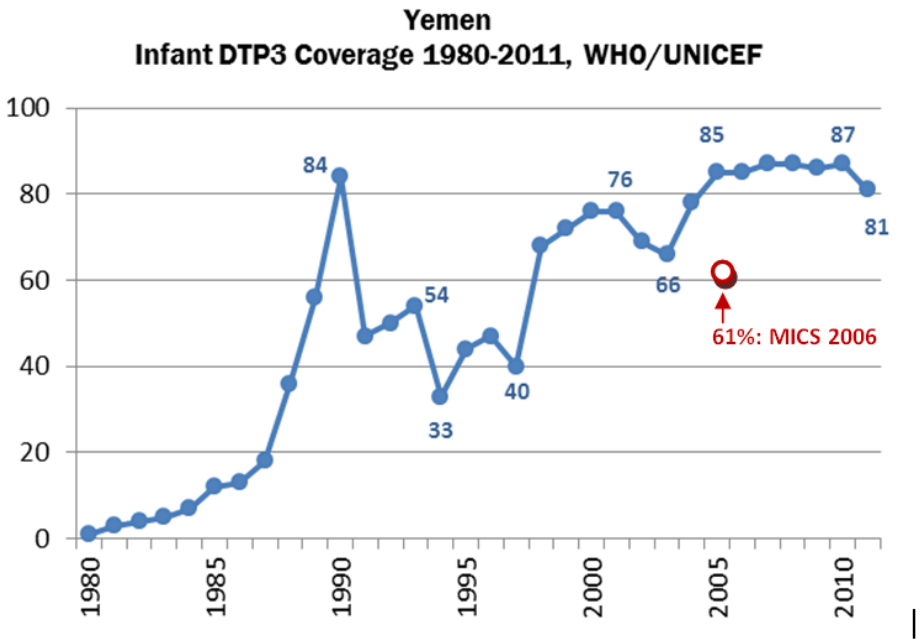
The team looked at child health beyond the newborn period to explore where MCHIP might potentially intervene.

Immunization

The Yemen EPI program heavily relies on outreach and campaigns, but routine service delivery is weak overall. However, with constantly updated and available data, performing supply chain and a fairly functioning supervision system, the program is traditionally perceived as a model of success (dixit top leaders at MOPHP, UNICEF, WHO and DELIVER).

New vaccines: With support from the GAVI Alliance, Yemen successively introduced the pentavalent vaccine in 2005, pneumococcal vaccine in 2011, rotavirus vaccine in 2012 and is planning to introduce rubella vaccine in 2013. The country's approval for the introduction of pneumococcal and rotavirus vaccines was possible with GAVI's revised eligibility criteria for new and underutilized vaccines, requiring ≥70% DTP3 coverage based on WHO/UNICEF estimates. Yemen is one of the first GAVI-eligible countries in the WHO Eastern Mediterranean Region to introduce such new vaccines.

Overall performance of routine immunization:



Yemen's national EPI program has demonstrated instable performance since its implementation in the 1980's. Similar to other countries, Yemen saw an increase in reported immunization coverage, as Ministries of Health, UNICEF, WHO, and others worked to achieve 80% coverage through a focused approach on Universal Childhood Immunization in the 1990s. After a brief period in 1991 with DPT3 coverage above 80%, Yemen was not able to get back to the same coverage level again until 2005, when the pentavalent vaccine was introduced to replace DPT. After 2005, the country consistently reported DPT3 (penta3) coverage above 85% in the last 6 years, but is again experiencing declining coverage rates.

DPT3 coverage dropped from 87% in 2010 to 81% in 2011 and available data in 2012 (January-June) suggests lower expected achievement at the end of the current year as shown in table below. Achievements in individual governorates are variable but it is clear that the governorates with sparse population and difficult access in the western part of the country are much less performing (Al Jawf, Ma'rib, Shabwah, Al Mahrah, Al Bayda' and Abyan).

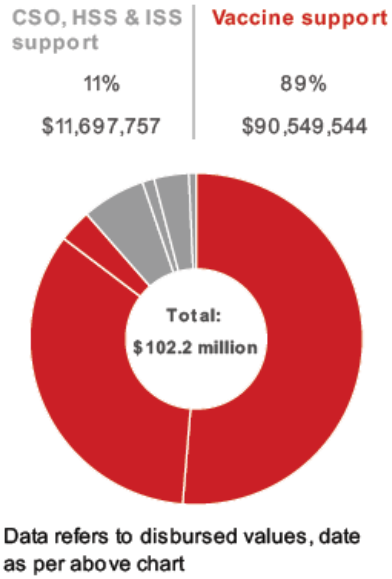
Many children who began their DPT vaccination series in 2011 did not complete it (9% drop-out rate between DTP1 and DTP3 in 2011). Serious concerns were raised because of measles outbreak in 2011 as a result of the declining immunization coverage. The measles epidemic started in mid-2011 and as of August 2012, over 4,500 suspected cases of measles and 180 deaths had been reported by the MOPHP. The death toll is certainly due to the combined effect of low immunization coverage and problems of malnutrition. The number of confirmed measles cases posted on the WHO website[26] for 2011 and 2012 is 1,403.

[26] http://www.who.int/immunization_monitoring/diseases/measlesreportedcasesbycountry.pdf

Governorates	Target 0-11m (2011)	*Coverage 2010*				*Coverage 2011*				*Data Jan-June 2012*			
		BCG	Penta1	Penta3	Msles	BCG	Penta1	Penta3	Msles	BCG	Penta1	Penta3	Msles
Ibb	92,784	72	96	90	80	67	93	87	77	68	80	73	84
Abyan	17,189	48	97	89	67	35	89	80	66	24	64	53	42
San`a' [City]	73,886	117	100	94	85	103	91	83	82	91	84	84	84
Al Bayda'	20,444	65	104	89	70	59	103	85	69	47	72	62	56
Al Jawf	18,705	20	110	80	51	0	0	0	0	5	5	4	3
Al Hudaydah	94,017	48	91	86	67	41	87	83	66	37	69	66	46
Al Dali'	20,486	46	91	89	73	43	85	80	66	38	74	55	50
Al Mahwit	26,624	57	87	87	80	56	85	82	77	50	71	62	60
Al Mahrah	3,434	59	78	66	68	57	75	64	59	64	67	72	58
Ta`izz	102,817	67	96	92	74	62	90	87	71	33	77	74	66
Hajjah	67,820	58	94	91	70	52	87	83	64	6	73	67	48
Hadramawt 1*	21,070	85	101	97	87	77	94	87	81	58	71	79	74
Hadramawt 2*	14,519	81	91	87	83	75	88	82	78	63	74	75	77
Dhamar	56,999	78	103	96	83	72	102	90	81	66	86	73	68
Shabwah	19,201	35	91	79	63	38	78	70	62	37	68	57	54
Sa`dah	24,056	22	41	27	35	24	110	49	91	27	59	46	35
Sanaa'	32,790	59	97	90	73	56	79	72	60	60	83	63	55
Raymah	16,686	45	87	87	78	37	89	83	69	23	63	57	52
`Aden	17,576	97	97	89	78	105	97	83	77	83	87	101	80
Amran	39,147	59	88	78	68	53	86	78	65	52	72	64	57
Lahij	25,364	65	94	92	73	60	100	95	84	57	88	91	75
Ma'rib	8,468	50	85	76	54	54	87	78	65	52	77	69	55
Yemen	814,084	65	94	87	73	59	89	81	71	48	74	69	62

*Hadramawt 1 refers to Hadramawt Al Mukalla, Hadramawt 2 refers to Hadramawt Sayoun

Service delivery: Because of the difficult accessibility to health care, low utilization of existing facilities and overall lack of optimism in revitalizing them, Yemen increasingly depends on mobile outreach activities and on large national campaigns to achieve good coverage results and to reach children in rural areas. Supported by international resources, mobile teams provide multiple maternal and child health services, including routine immunization, to more remote communities and sometimes next to poorly functioning rural health facilities. Support to routine immunization is weak overall. The result of a small-scale study on immunization missed-opportunity[27] conducted in April-June 2009 provides an illustration of the problems at the service delivery level. There were 63.5% (68/107 eligible clients) missed opportunities among children under 24 months and 60.2% (531/881 eligible clients) among women of reproductive age (15-44) attending a sample of 10 health facilities.



Data refers to disbursed values, date as per above chart

Vaccine financing and donor support

- Through mid-2012, Yemen had been approved for just over $111 million in GAVI Alliance support. GAVI support enabled Yemen to introduce the pentavalent vaccine in 2005. The Government of Yemen will co-finance the vaccine with $6,600,000 from 2012 to 2015.
- Of the $102,247,301 funding disbursed by the GAVI Alliance to Yemen between 2001 and 2012, almost 90% was allocated to supplies and 10% to strengthen the health system and to support the service
- Yemen has agreed to co-finance the pneumococcal vaccine from 2012 to 2015 with $2,991,500 and the rotavirus vaccine from 2012 to 2015 with $1,880,000.

Recommendations

Yemen's history of repeated fluctuations in coverage, significant differences in reported and survey results, as well as the past six years of coverage stagnation and decline in the last two years should serve as a warning signal to all key stakeholders and their partners that the immunization system requires continued attention.

- Support to routine immunization: The MCHIP team recommends assistance to the national immunization program with focus on routine immunization to raise and maintain routine coverage. Revitalizing and using the RED approach to improve the planning, management and monitoring of routine immunization services, specifically in districts with large numbers of unimmunized and partially immunized children would make sense as RED is a known approach. Orientation/refresher training and more regular supportive supervision of the fixed PHC units who are supposed to provide most of the country's routine immunization services also appear to be necessary.

[27] Pathfinder-Basic Health Service 2009 (not published)

Prevention and Management of Childhood Illnesses

Pneumonia: According to the Countdown 2012 Report, pneumonia is the first cause of child mortality in Yemen (16%). The 2006 MICS states that 38% of children <5 years with suspected pneumonia received antibiotics. There are disparities in antibiotic treatment of children in urban (49%) and rural areas (34%). As with many conditions, treatment of suspected ARI was lowest among the poorest households and among children whose mothers/caretakers had not received any education.

At the clinical level, the IMCI Guideline recommends Amoxicillin as the first-line treatment for pneumonia in health facilities. Yemen is also moving towards adopting community-based treatment for pneumonia with antibiotics (the new guideline for Community Health Volunteers—CHVs—is in the process of finalization and is pending larger consensus during our visit and will allow the use of Amoxicillin at the community level). JICA had been implementing a project in 6 districts that supported treatment of suspected pneumonia with antibiotics through CHVs, however the project ended due to political instability. If implemented at larger scale, this could have a major impact on mortality from pneumonia.

Yemen introduced the pneumococcal vaccine in 2011 as part of the national EPI Program with assistance from international partners and the GAVI Alliance. The new vaccine is aimed at reducing the morbidity and mortality from pneumonia. The 2006 MICS suggested that 13% of children under-five had acute respiratory infection or suspected pneumonia in the two weeks preceding the survey.

Diarrhea: Diarrhea is the second cause of preventable child mortality in Yemen, responsible of 11% of under-five mortality in 2010 (Countdown 2012 Report). In 2006, diarrhea prevalence in children was estimated at 33.5%, with higher burden in rural areas compared to urban areas (35% and 29% respectively) and a peak in the first year of life (47%). A systematic review conducted in 2010 reported that rotavirus was detected in 40% of hospitalized children with diarrhea in the WHO Eastern Mediterranean Region, compared 45% in Asia, 38% in Latin America and 24% in Africa. [28]

Access to improved water sources and to improved sanitation reveals major disparities between urban and rural areas in Yemen. While 74% of urban households have access to improved water sources, the rate is only 52% for rural households (59% of overall) according to the MICS 2006. The gap was even wider for access to improved sanitation with 92% for urban households, compared to 34% for rural households (52% of total households).

In 2004, WHO and UNICEF issued a joint statement recommending the treatment of diarrhea with zinc and a new low-osmolarity ORS formula, instead of the previous

[28] Malek et al. (2010), The Epidemiology of Rotavirus Diarrhea in Countries in the Eastern Mediterranean Region, *The Journal of Infectious Diseases*; 202(Suppl1):S12–S22

WHO/UNICEF product. Zinc is associated with a 25% reduction in the duration of acute diarrhea, as well as a 40% reduction in treatment failure and death in persistent diarrhea. Low osmolarity ORS has been shown to reduce stool output, vomiting and the use of intravenous therapy when compared to the original ORS formula.[29] This recommended treatment is included in Yemen's IMCI training curriculum (part of a larger PHC approach, see below). However, the zinc treatment protocol is poorly developed and trainers do not seem to pay attention to this part. One reason is that zinc is not available in country, even in the most successful governorate of Lahj. In the field, none of the health facilities we visited had zinc available and none of the providers we encountered had heard about zinc as part of the treatment of diarrheal disease in under-five children.

UNICEF ordered an emergency kit of drugs as a response to post-conflict crisis but zinc was not part of the list. On the other hand, UNICEF is in charge of the supply plan for the Health and Population Project (HPP), a $30 Million program funded by the World-Bank. A total of 371,800 zinc tablets is included in the list to cover 2 years of the needs in six Governorates (Sana'a, Ibb, Reimah, Al Dahla'a, Al Baydah, and Aden). Based on the CHV Guideline (still being developed), both low-osmolarity ORS and zinc may now be used at community level. Still, all MOPHP partners need to reach a consensus on the package of services to be provided by CHVs.

Yemen introduced the rotavirus vaccine as part of the national EPI Program in 2012. The new vaccine is aimed at reducing the morbidity and mortality from diarrheal disease. In addition, the momentum has a very high visibility and can be capitalized on to raise the profile of diarrheal disease prevention and treatment in a broader way to encompass comprehensive messaging. The 2006 MICS suggested that 33.5% of children under-five had diarrhea in the two weeks preceding the survey.

Malaria prevention and treatment: The importance of malaria in Yemen as a cause of child mortality is not considered to of high public health importance. However, malaria risk, predominantly due to P. falciparum, is mainly seasonal, from September through February, in altitude below 2,000 m. The risk is minimal in high altitudes, including Sana'a. First line treatment of confirmed malaria is ACT[30].

Integrated Management of Childhood Illness (IMCI) training: Yemen began to introduce IMCI at facility level in 1998 and started initial training in 2000. Since 2007, an integrated PHC package was developed and includes family planning, antenatal, care during labour and birth, postnatal, IMCI and vaccinations. The 16-day integrated training module covering all the PHC technical areas is used to train health care providers (physicians and paramedical staff). WHO reports a total of 5,797 providers trained since 2000 with 77% of districts implementing IMCI (256/333) and 65% of health facilities having at least one trained provider (2,533/3,871). Based on data since 2006, the average number of trainees per course was 16 since 2006.

[29] WHO, The Treatment of Diarrhoea: A manual for physicians and other senior health workers, Geneva 2005
[30] WHO, World Malaria report 2011

Apart from information on training, there is little data monitoring IMCI implementation in Yemen (Basaleem and Amin, 2009). The program tends to be limited to training only, with minimal or non-existent supervision and support.

Year	Physicians		Paramedical staff		Total
	Trained	Cumulative	Trained	Cumulative	
2002	68	68	66	66	134
2003	33	101	235	301	402
2004	89	190	505	806	996
2005	21	211	359	1,165	1,376
2006	125	336	194	1,359	1,695
2007	102	438	392	1,751	2,189
2008	128	566	1,113	2,864	3,430
2009	146	712	761	3,625	4,337
2010	19	731	918	4,543	5,274
2011	39	770	204	4,747	5,517
2012 (>*June*)	50	820	230	4,977	5,797

With regard to pre-service training, there are two medical schools in Yemen, one in Aden and one in Sana'a. During our visit to Brief Al Sabeen Hospital in Sana'a, discussions with students at their final year - attending practice at the pediatric ward - indicate that they have had few or no exposure to IMCI protocol. There is a missed opportunity with future medical doctors and their pre-service training since most of their instructors at the hospital are IMCI trainers and could provide significant contributions. On the other hand, the High Institute of Health Sciences (HIHS) trains midwives, nurses and medical assistants (primarily oriented to rural areas) and is administratively attached to the MOPHP. We were not able to visit the Sana'a main branch where collaboration on midwifery trainings was discussed. The Sana'a branch does not train medical assistants and therefore, it would be valuable to further explore the training curriculum in other branches.

Service delivery: The 2010-2025 National Health Strategy (NHS) specifies that the first level of health care is constituted by a network of PHC units and health centers that are "presumably" providing a basic package of health services as first contact for preventive and curative interventions before patients are referred to higher levels in the health system if needed. The NHS recognizes that the network (officially 3,616 facilities countrywide in 2008) is not well distributed and not well functional.

Quality of health services for under-five children is poorly documented. In the facilities we visited, the overall environment discourages IMCI practice. There was no tool available (ORT materials, timer for respiratory count, register, individual IMCI case management or reporting form). While there were noticeable evidences of investments to implement and efforts to sustain QOC approaches for Reproductive Health, we could not find anything similar related to Child Health. Both skills of care providers (e.g. general unfamiliarity of zinc treatment of childhood diarrhea) and availability of commodities (e.g. inexistence of zinc tablets and ORT materials) are major problems.

In order to resolve the problem of access to health care, service delivery in Yemen tends to rely on mobile teams in rural areas. Many partners (including former USAID funded projects like Save the Children and a newly approved World-Bank project) support mobile teams with doctors, nurses and midwives transporting drugs and materials to villages to deliver PHC and immunization services. Planned from the district office, the schedule of these teams includes service provision in and around health facilities with limited functionality. This approach seems to be particularly expensive. Its value added and sustainability compared to strengthening fixed facilities might need further assessment to make careful decisions for additional investment from USAID.

In urban areas, private facilities seem prosperous. Most providers in public hospitals and health centers do part-time private practice but lack of data make it difficult to fully assess the contribution of the private sector. Both in urban and rural areas, private pharmacies and small drug sellers in villages are also very successful due to the shortage of drugs at health facilities. Despite weak regulation and serious doubts on the origin and quality of drugs being sold, these drug shops are often used as a primary source of care for childhood illnesses.

Recommendations

At the facility level: Since the MOPHP is strongly devoted to its vision of an integrated approach to key services at the PHC level, the team suggests that providing assistance to improve this approach is the best investment:

- An initial review of the technical content of documents and approaches should first be conducted. MCHIP is well placed to help in making sure that all internationally recommended best practices are included. MCHIP could also contribute in improving provider skills and quality of care.
- Potential adjustments to technical content might be in the form of: Addendum to the training curriculum, revision of the integrated supervision tool, new communication tools
- Develop Quality Improvement approach for PHC by developing simple integrated standards adapted from RH approach, e.g. pair support
- Provide refresher training, follow-up and supervision to providers
- Find a sustainable mechanism to ensure drug availability, with priority on Zinc.

We do not recommend large investments in expanding the mobile health teams at large scale as they are costly and their impact on access to health care and mortality reduction is unknown.

Pre-service training: It would be worthwhile to explore the opportunity of integrating IMCI and other key skills into the curriculum of medical assistants who are supposed to serve the rural area.

At the community level: The team recommends MCHIP explores ways towards community case management (CCM), integrated with other key maternal and newborn services to increase the coverage:

- Participating in the finalization of the current CHV guideline
- Facilitating consensus-building among partners and developing an implementation guideline of community-based services, using lessons learned from previous experiences such as the JICA project
- Implementing a learning phase of community-based services

The existing network of drug sellers seems to be an important opportunity to expand access to quality child health services. However, the implication of such cadre in a child survival program needs to be cautiously designed. We first suggest a thorough feasibility study, looking specifically at interests from community members and drug sellers, motivation factors and potential barriers as well as sustainability issues.

Nutrition

Malnutrition is on everyone's radar as a series of governorate level SMART surveys found shocking levels of stunting and wasting. Causal factors likely include poor birth spacing, low rates of breastfeeding and inadequate introduction of complementary foods, in addition to poverty and food insecurity. Therapeutic feeding centers exist, but are poorly linked with early recognition. Post discharge counseling is inadequate.

Anemia contributes to maternal and child mortality; yet prevention of maternal anemia is poor (no IFA). No routine deworming despite reported high prevalence. Malaria in pregnancy (MIP) in endemic and seasonal malaria areas contributes to anemia rates. A campaign is ongoing for universal coverage for ITNs in those areas. There is also a campaign ongoing for Vitamin A through the EPI campaigns for children over 6 months of age[31].

PMTCT and pediatric HIV

The HIV prevalence is estimated at 0.2 percent of the population. There are 4 VC and T centers in the whole country (we saw one at YFCA in Sana'a). PMTCT is not mainstreamed, but the NHRS mentions plans to integrate this into ANC (NRHS 2011-15). Whether this is worthwhile, given the level of transmission is questionable.

PMTCT services are available in 2 (+) sites; in Sana'a and in Aden respectively. Women who test positive at YFCA are referred to sites where ARVs are available.

Recommendation

- MCHIP should follow evolution of expansion of PMTCT and pediatric HIV carried out by other donors and consider opportunities to integrate in programs when commodities available & staff trained.

[31] *Note:* Vit A for women in immediate postpartum (a 'best practice' in Yemen) is no longer recommended (WHO 2011)

Family Planning and Post-partum Family Planning

The 2006 MICS estimated that 54% of currently married women have satisfied their need for contraception while 13% have an unmet need for spacing and 11% have an unmet need for limiting births for a total unmet need of 24%.

Overall contraceptive prevalence is 28%. The MICS considers LAM to be a traditional method. However if it were to be reclassified as in the DHS as a modern method, then 25% of married women of reproductive age are using a modern method.

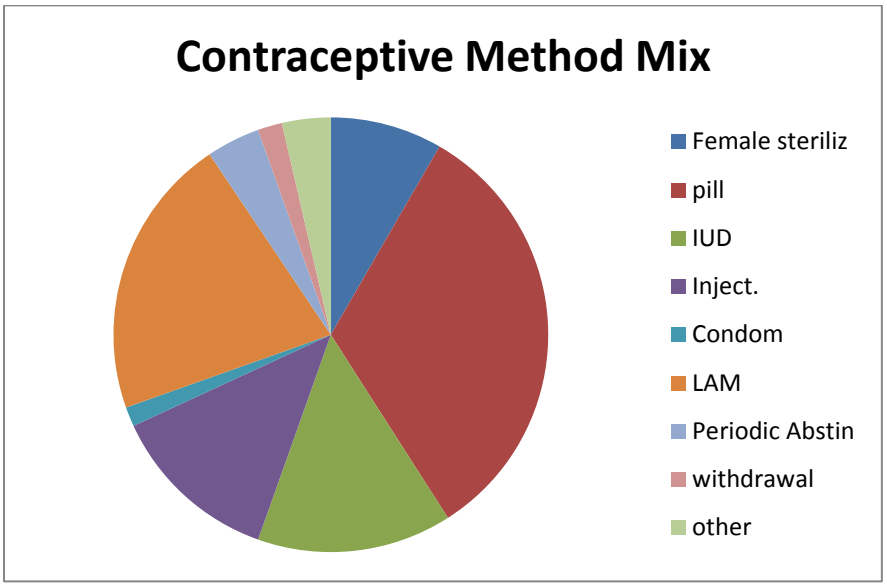


Figure 3. 2006 MICS Method Mix (Only data on users is shown – excludes 72% non-users)

The recent EmONC site assessments in 10 governorates also examined the availability of FP services. They found inconsistent availability of services. Reasons are dual: stock out of commodities and unavailability of staff trained in certain methods, in particular IUDS and implants. Percentages of staff trained in counseling are low, sometimes in the single digits. Continuation data on women who have accepted methods of contraception was not available.

From the IEC materials shared by the Department of RH, it seems that a range of methods is articulated in guidelines and in the educational materials that were developed. At the HIHS, we were shown copied of the Family Planning Global Handbook in Arabic. At YFCA, Tiarht contraceptive method posters were affixed to the wall in the Family Planning room.

Review of documents and discussions with the German RH project suggests a high prevalence of medical barriers to access as well as socio-cultural resistance, even though awareness of family planning is high. One reliable source is a survey of 1400 men and women and 115 providers (private practitioners and pharmacists) on Knowledge, Attitudes and Practices (KAP) carried out by MSI-Yemen to evaluate their Social Marketing Program in 2010. Eighty three percent of private providers and 90% of

pharmacists in that survey stated that women should not use injectables until they had at least one child. Ninety six percent of private providers and 86% of pharmacist believe pills cause headaches. Furthermore, 47% of private providers and 27% of pharmacists believed that pills cause cancer and fifty percent of private practice providers and forty percent of pharmacists believe that IUDs can move about the body.

Not surprisingly, these medicalized notions of side effects are reflected in the beliefs of male and female respondents of the survey. Sixty nine percent of women and 61% of men concurred with statement that contraception may harm the woman who uses it, and a further 50% of women and 41% of men believe that contraception can harm a future baby. Other than desire for a child and current pregnancy, the top two reasons for contraceptive non-use among married women were that contraceptives are bad for her health (18%) and side effects (17%). Although provider attitudes were not reflected in the report, 43% of women and 38% of men believed that infertility could result from using a method of FP.

Among social cultural barriers, a high proportion of KAP respondents think that FP should only be used after a first child is born. Only 7.5% of women agreed that contraception w be acceptable to use before the birth of a first child (18% of men indicated the same). A fifth of women and 30% of men responded that use of contraception is against Islam. On the positive side, 97% of women and 93% of men believe that using FP improves the education prospects and health of children.

The characterization of LAM as a traditional method in the MICS survey and its complete absence from data collection in the MSI-Yemen survey suggests that this method is not sufficiently promoted. Yet with in a conservative society, promotion of LAM could be acceptable to all users and might improve adherence to recommendations for exclusive breastfeeding of young infants. Indeed, providers at the referral hospital reported that they mention LAM but really would rather women chose a 'modern' method. Registers do not capture breastfeeding status of family planning acceptors.

Implants and male sterilization are methods least well known according to the KAP study. (Neither PAPFAM 2003 nor MICS survey reports include tables on method awareness, only ever and current use of contraception).

Successful past initiatives includes engaging religious leaders in raising awareness and expressing approval for family planning. Both Yamaan and Pathfinder shared experiences with our team on developing programs targeting imams and other religious leaders, conducting workshops, distributing sermon guides and enlisting their commitment to promote the practice. It seems significant scale was achieved with this, at least in BHS governorates (with 186 religious leaders involved). Yamaan even suggested that in some areas around Abyan where Islamist militants are active, there may be some backsliding of progress among the community and suggested the need for renewed efforts to enlist religious figures in speaking out for contraception.

While PPFP was cited as one of the BHS project best practices and was introduced in some hospitals and HCs, we didn't actually observe much activity in facilities. Providers point to the rapid departure of women postpartum as a barrier. Pathfinder has training

package for PPIUD, has carried out one course (according to the MOPHP) and includes distribution of long forceps as part of their training. The training package also includes use a video, but we could not ascertain if it is the same as the one in the ACCESS CDrom. The Amran Family Health Center was supported by BHS, but yet their IUD kits did not include long forceps (ask Holly to verify using photo of kits).

YFCA was not yet offering PPFP services consistently but reported plans to recruit a full time social worker whose role could be to counsel women on PPFP and particularly to offer PPIUCD services. If services could be established at their maternity hospital and attain sufficient case loads, it could potentially serve as an excellent training site.

USAID Mission staff expressed interest in use of television for mass media, preferably using Yemeni produced content. According to the 2003 PAPFAM survey only 38% of women watched television daily or at least once a week. However, this information may be dated as the MSI-Yemen KAP study reported that 83% of their respondent own a television set, with higher rates among urban and peri-urban respondents but still appreciable rates among rural respondents (71% among rural men). The lowest access was among the refugee respondent group.

Recommendations

- Review RH guidelines and IEC materials by Arabic speaker for consistency with WHO medical eligibility criteria and latest version of Global Handbook.
- Review the PPIUD training package from Pathfinder and review for ability to use as is.
- Identify PPIUD sites that could also serve as training sites at a later stage. Explore the YFCA facility and other options
- Initiate a MIYCN-FP operations research program in Hodeidah, drawing from Bangladesh lessons for community based work and Kenya for both facility and community-based efforts. The linkages between family planning and a good nutritional start in life should further be linked to ongoing efforts to manage acute malnutrition, thus providing the potential to prevent future malnutrition crises. Save the Children is well poised to operate in that governorate and carry out this work for MCHIP.
- Consider funding NGOs or Advocacy groups to continue/extend work with religious leaders in MCHIP governorates
- Invite a mass media BCC expert to visit Yemen to explore options for programming on TV, per Mission request

Recommendations for USAID investment through MCHIP

MCHIP programming in Yemen would include relevant technical areas in MCHIP's mandate:

	Pre-pregnancy	Pregnancy	Labor and Delivery	Newborn	Immunization	Child health
Household - community-hospital	FP	ANC	SBA	ENC	Routine Imm	CCM
		PAC	PPH	KMC	NUVI	ORT and Zinc
			PE/E	Resusc		
	WASH; Nutrition; Urban health; M-Health; Malaria; PPFP					
	Health System Strengthening; P4P; community mobilization; policy development and guidelines					
	Strategic Integration					

The team worked on determining a set of activities for the initial period under field support, called 'Quick Start' (Year 1) as well as longer term initiatives, which will need further development and detail.

Goal: Reductions in maternal and child mortality and morbidity

MCHIP Country Program Strategic Objective: Increased use and coverage of MNCH/FP and nutrition high impact interventions (HII)

	1st year	5-year program
Objective #1: Increase access to and the quality of service delivery points that offer high impact MNCH/FP and nutrition interventions		
Quick start PPH program	Learning phase for miso with Yamaan; using social franchised community midwives, per agreement with High Supreme Court Location: Lahj districts that have operational BEMONC facilities	Scale up through midwives in other governorates. New learning phase with expansion to CHV and/or distribution through mobile teams (see below).
Quick start MIYCN-FP	Learning phase linked to humanitarian response in Al Hodeidah; community and health facility program to promote exclusive breastfeeding (EBF), Lactational Amenorrhea Method (LAM) and transition to nutritious supplementary foods and modern contraceptive methods at 6 months. Also routine immunization schedule reinforcement. Start with desk review and formative research around BF practices, perceptions of complimentary foods, appropriate foods in pregnancy and early childhood. Then select districts for interventions at community and facility level on integrating MIYCN-FP	Scale up strategy for MIYCN-FP, expansion of modern methods in HF and in community and private midwifes practices, including PPIUD and implants. Expand to all USAID-supported governorates. This may require new formative research to adapt messages and educational materials to new local cultural contexts Expand on past support to religious leaders sharing messages on healthy timing and spacing, breastfeeding, IYCN, immunization and care seeking behaviors (Yamaan and other models).

	1st year	5-year program
Quality improvement	MCHIP launch 'conference' with skills station on latest international evidence-based practices for maternal, newborn and child health and FP. Skills demonstration and action planning for MCHIP. Thorough desk review of existing national guidelines, training materials and quality standards and prioritization of revisions or addendums. Mapping of existing QIP efforts by GIZ. Understanding IST methodologies for : • 16-day integrated PHC training course • BEMONC Identify ways to improve competency-based methodologies in IST (and PSE) Explore existing QI methodologies and achieve consensus on what MCHIP will replicate and scale up.	BEmONC/FP/IMCI quality of care baseline survey (move to M&E) Collaborate with GIZ project on expanding quality standards to PHC component areas. Testing of OJT and onsite training for BEMONC and IMCI Scale up of QIP, including pictorial standards for illiterate community volunteers Explore possibility of quality branding programs for midwives in private practice (but operating outside of Yamaan social franchising system), with YMA branches re-certifying on a periodic basis in collaboration with GHO or other stakeholders.
Improved BEmONC and postnatal care (immediate and in first week)	Raise awareness of role of PNC in mortality reduction for both mother and newborn. Advocate for inclusion of improved protocols in BEmONC for PE/E management, prevention and management of PPH, newborn resuscitation and management of sepsis in both mother and newborn. Support competency-based training on anatomic models. Advocate for routine home visits to mothers and babies within 48 hours of birth by any cadre available, in accordance with WHO/UNICEF Joint Statement. Share evidence from India, Bangladesh, Pakistan of mortality impact of such programs	Conditional on guarantees of 24 hour service delivery, support BEmONC training for additional providers. Support establishment of Kangaroo Mother Care units in BEmONC facilities with beds for longer term care of low birth weight infants. Expand PNC at home, with good job aids, including respiratory rate counters, etc.

	1st year	5-year program
Objective #2: Increase the availability of community workers and improve the quality of HII interventions delivered at community level		
Extending services into underserved communities through community workers	TA from community mobilization and BCC experts to explore further opportunities and define a strategy. Participation in finalization of CHV guidelines and advocate for inclusion of initiation of pills by volunteers, census of pregnant women, promoting ANC in facilities or by CMWs, BP/CR and education for SBA, awareness of maternal and newborn danger sign, WASH (including potentially water purification), PNC within 2 days following delivering for detection and referral of maternal and newborn danger signs. Expanding, updating or reproducing IEC materials for use by volunteers. Reproducing/adapting or developing pictorial reporting forms and strengthening supervision of CHVs	Implementation of CHV in underserved areas of districts in MCHIP governorate or areas of poor health-seeking behaviors. CHV recruitment and deployment needs a functional provider (could be a private or community midwife) or HF as a referral as a precondition. (potential expansion phase, model of supervision of CHVs that are supervised by mobile teams, but concern of sustainability in this example) Potential after base established: testing model of volunteers giving injectable contraceptives and/or first dose for newborn possible serious bacterial infection in newborn
Raising community awareness and demand for quality care and mobilization for community	Adaptation of Community Action Cycle materials and training of NGO partners in the methodology (concurrently with PPH and MIYCN-FP learning phases)	Expansion of CAC around quality program to generate demand for quality and increase community participation. Increasing community capacity is important for sustainability of program.

	1st year	5-year program
Public Private Partnerships	Feasibility study of training informal drug sellers in community case management (CCM) of childhood diseases, including nutrition, in collaboration with Yamaan.	Training of drug sellers in CCM, expanding range of socially marketed products including water purification and storage. Explore public/private partnerships for drug supply in facilities if availability of essential drugs continues to be a challenge. Support expansion of volunteer private midwives at community level, through YMA for example.
Objective #3: Improved home-based MNCH/FP and nutrition practices and behaviors		
Support national BCC strategy for HII on MNCH/FP and nutrition	Conduct a review of existing strategies and materials. Connect with UNFPA supported effort to update strategy and identify areas where MCHIP will support	Develop materials for community-based BCC Design and produce Yemeni Edutainment content for TV audiences in support of HII uptake at household level.
Objective #4: Support District Health Teams to adequately manage and sustain HII in their districts in collaboration with Governorate Health Offices		
Capacity building and support to District Health Teams	Understanding of planning process at district levels and how to improve data-based decision-making and planning. Document examples of performance based financing and improvements in HMIS to use in district knowledge exchanges	Creating awards and other public recognition of high performing district teams (public sector and local council health committees) at governorate level, but with publication in national media. Involvement of CSOs and community leaders in process. Explore performance based financing? Creating knowledge exchanges between districts to benchmark solutions to common problems and replicate them. (Avoid duplication with QIP)

	1st year	5-year program
Mobile teams		Limit involvement to supporting DHMT to set standards for equipment and supplies and supervisory mechanisms, but not funding actual teams and outreach services (this may be politically difficult but we feel investing in CHVs is a more sustainable approach. Especially if can expand their toolkit.
Objective #5: Advocate for increased political commitment and mobilize resources for HII in MNCH/FP and nutrition		
Advocacy for local council prioritization of MNCH/FP through civil society	Establish agreement with NSMA, e.g. to develop "supportive environment index" for governorate and district councils and surveying key governorates. Would include indicators about funding for MNCH/RH staff and activities in local budgets.	Support to CSOs for improving index at governorate and district level. Recognition of policy champions and high index councils. Support to YMA for professionalization of midwifery and to strengthen regulatory framework for the profession, in collaboration with ICM.
Central level policy support	Based on receptiveness, explore need for policy liaison at central MOPHP to facilitate linkages on technical issues. Actively participate in forums where needed to interject international evidence base to revisions of policy documents, guidelines and standards, training materials, etc. Engage in revisions of Essential Medicine Lists that is upcoming.	Support coordination across departments to improve coherence of guidelines for field level workers. Explore modalities for integration within local context. Assist with advocacy to external bodies that have a role in health financing, engaging with CSOs where appropriate.
mHealth	Ensure that questions on access to mobile phones is in DHS	Once DHS results are available, explore use of mHealth to improve quality of care, community awareness, data quality, etc. Explore linkages with Yamaan call centers.
Objective #6: Improve human resources planning and preparedness of new graduates to perform upon graduation from pre-service education institutes		

	1st year	5-year program
Quality of preservice education of midwives	Consultations on quality standards for preservice education of midwives Assessment of teaching institute capacity for competency based education and training.	Support HIHS branches in quality education to foster job readiness for all graduates to practice independently and perform all key life-saving competencies, consistent with international standards. Explore feasibility of establishing transparent system for accrediting both public and private midwifery schools.

Annex 1: Documents Reviewed To be completed

MOPHP (X) **MANUAL OF NEONATOLOGY** (*Curative focus for middle income countries e.g. KMC not mentioned)*

(X) **DOCTOR PROTOCOLS FOR ESSENTIAL OBSTETRIC CARE (***Some harmful practices; some inaccurate & some updating needed)*

Annex 2: Program Description

USAID/ Yemen Program Description
For the Maternal and Child Health Integrated Program (MCHIP)
Cooperative Agreement number: GHS-A-00-08-00002
August 2012

PURPOSE

USAID/Yemen plans to provide field support funding to the MCHIP project to support USAID efforts to strengthen the MCH and FP services of the Ministry of Public Health and Population (MoPHP). This field funding will allow MCHIP to mobilize a team to conduct a needs assessment and gaps analysis for MCH and FP programing in Yemen, develop a concept paper for the planned Associate Award to MCHIP, and initiate the implementation of key MNCH/FP activities.

BACKGROUND

Yemen Health Situation:
Yemen has the worst health outcomes in the Middle East region. Yemen's health system and its health outcomes more closely resemble countries in sub Saharan Africa. Yemen lags behind its neighbors due to many factors including: extreme poverty; geographic inaccessibility; long term conflict and instability; cultural barriers to women's education; and limited capacity and resources of the Government of Yemen (ROYG) to deliver quality health services. Poor health status preceded the 2011 political crisis in Yemen, but the instability and ongoing conflict have worsened the health situation, with malnutrition and infectious disease being of particular concern.

Yemen faces substantial rates of preventable maternal and child mortality, large unmet need for family planning, and alarmingly high levels of malnutrition. Vaccine-preventable diseases continue to be present in Yemen due to gaps in immunization coverage, poor sanitation and hygiene practices, poor nutritional status and other health problems making the population more vulnerable to disease. Health outcomes are linked to economic status, security and political stability, gender, and education levels (particularly girls' education), but are also directly indicative of poor coverage and quality of health services. No recent nationwide health survey has been conducted, making determinations of mortality, fertility, and other flagship indicators difficult, but current estimates indicate a maternal mortality ratio of 370 maternal deaths per 100,000 live births, an under-five mortality rate of 77 deaths per 1,000 live births, and a total fertility rate of 5.3 children per woman.

Current USAID's Health and Population portfolio:

1. Integrated projects

a. Community Livelihoods Project (CLP): supports the recovery and development of economic livelihoods, public services, and strengthens community participation and capacities through short- and long-term grants.
b. Responsive Governance Project (RGP): strengthens the interaction between government institutions and citizens to improve the delivery of public services while encouraging more citizen participation in the public policy processes through assistance to dialogue and conflict resolution; planning, operational, and supervisory and monitoring functions.
c. Yemen Monitoring and Evaluation Project (YMEP): provides USAID/Yemen with continuous, on-the-ground performance monitoring, verification and evaluation of the output and outcome results, as well as environmental compliance under USAID projects and activities.

2. Projects in planning stages:
   a. Yemen DHS: 2012-2013 Demographic and Health Survey will be completed with technical assistance through Macro International.
   b. Supply chain management for RH (Deliver Project): USAID will contribute the technical expertise of the DELIVER Project, to help the MOPHP set up and manage the supply chain system including procedures for quantification and forecasting of needed commodities, ordering, storing, transporting, and tracking the commodities in order to ensure that adequate levels of stock are maintained at each service delivery point to meet the population's needs.
   c. Basic Services and Infectious disease Response in Conflict Affected areas: Funding a proposal received from WHO (the Health Cluster Lead in Yemen) to contribute to the maternal and child health components of the basic service delivery response in conflict-affected areas.

PROGRAM OBJECTIVES AND ACTIVITIES

MCHIP technical assistance will contribute to the overall measurable goal of the USG-assistance to the MCH and FP sectors in Yemen and will support improvement in the services offered at the facility and community levels through the implementation of high-impact and evidence-based interventions. The overall goal for USG assistance is to reduce child and maternal mortality and improve the health services offered by the ROGY to the Yemeni population affected negatively by the recent political and economic crises.

Key approaches for USAID programs, including MCHIP, are:

- Address MoPHP needs and priorities
- Follow-up on Child Survival Call-to-Action commitment
- Build on successful USAID experiences and Best Practices (BP) in MNCH-FP
- Support and strengthen key technical areas (MCH-Newborn Health-FP-Nutrition-WASH) by improving service provision at the facility level (supply side) and health seeking behavior and community services (demand side).
- Introduce/expand new innovations

Technical areas to be covered by MCHIP include:

1. Support Maternal Health Services with a focus on the prevention of post-partum hemorrhage and pre-eclampsia and eclampsia (PPH and PE/E), initial activities include:

    - Assessment of the level of PPH and PE/E Prevention and Management implementation, identify gaps (e.g., using the Dhaka Conference scale-up maps), and recommend ways to achieve institutionalization and sustainability.
    - Document best practices in PPH prevention and management and provide advice on how best to scale up implementation.
    - Support MoPHP to scale-up misoprostol at the community level (include registration in EDL).

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2. Support the Scale-up Essential Newborn Care:
    - Assess current NB resuscitation work
    - Share GDA/HBB global work and examine need to introduce in Yemen.
    - Support efforts to develop/revise training materials, provide equipment, train service providers, and provide ongoing TA support.
    - Revitalize Kangaroo Mother Care (KMC) as a Best Practice to address prematurity.
    - Ensure the basic newborn care services and post natal care visits are offered to all newborns.

3. Strengthen Family Planning Services:
    - Conduct rapid assessment of long-acting permanent method (LAPM) program implementation at public health facilities and provide concrete recommendations on scale-up and improving these services.
    - Develop and strengthen training sites for immediate post-partum intra-uterine contraceptive device method.
    - Strengthen counseling and services for the PPFP period and promote healthy timing and spacing of pregnancy services at the facility and community level.
    - Examine opportunities for strengthen integration of family planning and maternal and child health and provide recommendations.
    - Support community midwifes to expand community FP services.

4. Address Maternal Anemia:
    - Establish baseline-include anemia module for women and children in YDHS.
    - Build consensus among partners and develop guidelines to improve existing maternal anemia control programing.
    - Ensure supplies and forecasting for IFA as part of supply chain management system
    - Ensure availability and delivery of IFA at ANC centers
    - If ANC coverage is low, encourage delivery of IFA through community based distribution such CMW or private shops
    - Develop a strong BCC message linked with other MCH message

5. Support to selected Child Health activities, including immunization, will be based on the need assessment and discussions with MoPHP, the UN and bilateral partners.
6. Other areas could include support to pre-service and in-service training of midwifes including community midwifes to improve MNCH/FP services.

The following is the proposed time- line for MCHIP Technical Support under the field funding:

1. As soon as funds are included in the USAID's Field Support Data Base (or when the Mission sent an official request to the AOR), MCHIP should mobilize a team to conduct in-country need assessment and gap analysis for the MCH and FP sectors. The team will review documents provided by USAID/Yemen such as draft Country Strategy and notes from the round table discussion held at USAID/W on July 17, 2012 and other relevant documents. MCHIP will consult with in-country partners and the MoPHP and receive briefing from the USAID/W ME bureau.
2. MCHIP will be expected to provide recommendations on appropriate areas for interventions and strategic approaches for MCHIP support taking into consideration work of other partners and develop a concept paper for the Associate Award based on the assessment report which outlines the technical areas that MCHIP can address to improve the MNCH-FP services of the MoPHP and expected results.
3. A detailed work plan for the field support funding will be expected to include the above tasks and initiating implementation of selected activities from the above list for approximately 8 months after conducting the needs assessment and developing the concept paper for the Associate Award. .

GEOGRAPHIC FOCUS OF THE MCHIP PROGRAM:

It expected that MCHIP will work at the national level and in selected governorates to be decided by the Mission after the Country Strategy is finalized

PERIOD OF PERFORMANCE AND FUNDING LEVEL:

The period of performance for this activity is one year starting approximately from September 2012 to August 2013. The total estimated funds planned for the MCHIP field support funding is about $1,000,000.00 of MCH and FP/RH funds (subject to availability of funds). The Mission is also planning to develop an Associate Award to MCHIP, its duration and funding levels will be officially shared with MCHIP as soon as the necessary approvals are received and subject to the availability funds.

Annex 4: MCHIP TEAM VISIT SCHEDULE IN YEMEN 4 – 18 October 2012

Saturday	Sunday	Monday	A	Wednesday	Thursday	Friday
29	30	1	2	3	4 Team Arrives	5
6	7	8	9	10	11	12
Team Meets with Contacts (Note when the team split up, initials indicate the subset of the team. Also, while Dr. Nawal attended many of the meetings, she is not included here)						
9.30am Dr. Nawal Baabbad USAID @ hotel 12.30pm Dr. Jamela Al Raiby Deputy Minister for Population and Dr Eman Al-Kubati, DG RH MOPHP Dr. Abdul Al Mahmud Najeb, Director Child Health (briefly) Dr. Ali Jahhaf, DG Family Health, MOPHP 3.30 pm Jerry Farrell, Casey Harrity & Dr. Shihab Ibraheem, Save the Children	10am Arwa Baider. CH Program Officer and Salwa Al Eryani, MNH focal person, UNICEF 11.30am Ashraf Badr and Ebrahim Alharazi, Yamaan	9am Dr Hussein Z. Al Haddad, DG of Al Sabbein Hospital Dr Najla Al Sonboli, Pediatrics/Nutrition Dr. Elham, Dr. Mohamed Azubairy, Maternity 10.30am Visit to Yidd'r Health Centre HC with Abdussalam from Save the Children 12.30pm Dr. Adel I. Al-Moayed, DG Health Policy Unit MOPHP 1.30pm Dr. Mona, Dr. Areej and Dr Mohamed El Emad, WHO	8.30am Dr Yahia AlBabily, Dr Akram Shergebi and Dr Ahmed Assalahy, Pathfinder (SC, AP) 9:30am Dr Eman Jahhaf, Dr Mansour Ghaleb and M Alshamawal, Nutrition MOPHP (SR) 9.30am Dr Eman Al-Kubati, DG RH MOPHP (SC, AP) 12.00 UNFPA Marc Vanderberghe, Himyar Abdulmoghni (SC, AP) 12:30pm Dr Majid Al Jonaid, Deputy Minister for PHP	Visit to Amran with Dr. Shihab, Save the Children (using SC vehicle, per travel permits). Met SC staff person Misra in Amran Meeting with Governorate Health office: Dr. Abdelaziz Abdullaye, DG and Dr. Qhuda, Head of RH Visits to Amran Family Health Center and Amran Hospital Stop at SC suboffice before return to Sana'a	10:30am Dr Ghada Showgi, Director EPI MOPHP 1pm Sarah Bernhardt, EEAS/EU and Mohamed Aideroos, Dutch Embassy	**DAY OFF** 7.30am Dr Omar Zein DG Lahj Governorate @ hotel

Saturday	Sunday	Monday	A	Wednesday	Thursday	Friday
			(SR) 2.30 NSMA. Dr. Asma Ghaleb, et al (see contact list for names) (SC, AP)			
13	**14**	**15**	**16**	**17**	**18**	**19**
Team Meets with Contact					Anne departs 10.00	
9.30 Private midwife (SC, AP) 11.30 CLP, Dr. Nagwa Winget (SC, AP)	**National Holiday** (South start of revolution against British rule)	8.30-9.30 YFCA Dr. Nail Al-Ammari, et al (see contact list) (SC, AP) 10.30 Saleh Nagi Al-Badani, Kai Stietenroth and Corinna Witte, GIZ	8:00 HIHS, Dr. Taha Almahbashi, et al (see contact list) **Team worked on presentation/report**	**Debrief with USAID** 8.00 Bob Wilson, Dora Plavetic and Nawal Baabaad (Side conversation with Rick Carbone, FFP, OFDA)		
2pm World Bank, Ali Al Mudhwahi (SC, AP) 2:30pm Arwa Baider UNICEF (SR) 4.00pm Jerry Farrell, Save the Children (SR, AP)		12.30pm Abdulhakim Al-Nehary, Deputy Director, Tawbeeq Quaied, Jafar Rabie and Muaadh M Thabit, Immunization team MOPHP (SR) 1.30 YMA Suad Qasem, Fatoom (SC, AP)		Serge departs at 7 PM and Sheena depart late		

Annex 5: Persons contacted

Organization	Name	Title/Position
USAID Yemen	Dr. Nawal Ali Baabad	Health and Population Specialist
USAID Yemen	Robert J. Wilson	Mission Director
USAID Yemen	Dora Plavetic	Supervisory Program Officer
USAID Yemen	Rick Carbone	USAID Surge Response Officer – FFP and OFDA
MoPHP leaving for EMRO	Dr. Jamela Al Raiby	Deputy Minister for Population
MOPHP	Dr. Adel Ibrahim Al-Moayed	DG of Health Policy & Tech Support
MoPHP	Dr. Abdelaziz Abdullaye Dr. Qhuda	DG Amran Governorate Health Office Head, RH
MoPHP	Dr Omar Zein M'd	DG Lahj Governorate Health Office
MoPHP	Dr. Eman Abdulraheem Al-Kubati	DG of RH (and Acting for Dr. Jamela) soon to head Voucher Program at Yamaan
MOPHP	Dr. Ali M. Jahhaf	DG of Family Health
MOPHP	Dr. K. Abdul Al Mahmud NAJEB	Director Child Health
MOPHP	Abdulhakim Al-Nehary	Deputy Director EPI
MOPHP	Eman Jahhaf (acting)	Dir Nutrition
MOPHP	Dr Mansour Ghaleb M Alshamawal	Nutrition
MOPHP	Noora	Information System section
High Institute of Health Sciences	Dr. Taha Almahbashi	Dean
HIHS	Dr. Kamal Dahan Al-Sultan	Dir. Educ. Dept
HIHS	Mona Hamoud Nagi Al Hajri	Development and Academic Relationships Mgr
HIHS	Taheera	Midwifery Section
Al-Sabeen Hospital	Dr. Hussein Zein Al-Haddad Dr. Elham Dr. Mohamed Azubairy Dr Najla Al Sonboli,	Dir Gen'l Female GP Yng GP in Maternity pediatrics/Nutrition
CLP	Dr. Nagwa Samir Winget	Sr. Health Officer
Pathfinder	Dr. Yahia Yahia AlBabily Dr. Ahmed A Assalahy Dr. Akram Shergebi	Country Representative YRHP Manager
WHO	Dr. Mona Almudhwahi	Sr. Health Officer
WHO	Dr. Areej Mohammed Taher	Nat'l Prof Ofcr, MPS

Organization	Name	Title/Position
WHO	Dr. Mohamed El Emad	Nat'l Prof. Ofcr, Child & Adol Health
UNFPA	Marc Vandenberghe Himyar Abdulmoghni	Country Representative Assistant Representative
UNICEF	Arwa Baider Salwa El Eryani	CH Program Officer MNH focal person
World Bank	Ali Al Mudhwahi	Health specialist (former FH Dir; Comm at EMRO)
EEAS/European Union	Sarah Bernhardt	Attaché Health Sector
GIZ (formerly GTZ)	Corinna Witte Saleh Nagi Al-Badani Dr. Raed Faisal Nasser	Dty Program Coordinator/RH Adviser German RH program, Quality Component Mgr RH Promotion Component Manager
Netherlands Embassy	Mohamed Aideroos Al-Sakaff	Senior Program Officer, Health
Yamaan Foundation for Health and Social Development (note – manages social marketing in Yemen)(MSI)	Ashraf Badr Ibrahim Al-Harazi	Executive Director (and CD MSI) BCC and Marketing
YMA (Yemen Midwifery Association)	Suad Saleh Fatoom	President Scy Gen'l
YFCA (Yemen Family Care Association)	Dr. Nabil Al-Ammari Afrah Al Qershi Dr. Fares Al-Wael Dr. Nadia	Executive Director Programs and Advocacy Officer Surveillance and Relief officer Head of Maternity hospital
National Safe Motherhood Alliance/ WRA	Dr. Asma Ghaleb al-Shera'e Dr. Rami Taha Almaqtary Abdul Malek Al Tahame Mohamed Alkhiaty Zainab Alkulaibi Mohamed Samir Qhuda Dura Hashami	NSMA chairperson (also Peds fac) Deputy (also fac Comm. Hlth) Secy Gen'l Treasurer/finance Head of Training (also Youth Min.) Volunteer (helps with social media) Volunteer Volunteer (former NSMA admin asst)

Organization	Name	Title/Position
Save the Children Yemen	Jerry Farrell Shihab Ibraheem Casey Harrity Dr Abdussalam Misra	Country Dir Head of Health Dpty Program & Quality Health team member Amran suboffice health team member
IBTCI/YMEP	Mohamed Ibrahim	